21 A 195.
No. 33 C. 23.

BOSTON
MEDICAL LIBRARY
ASSOCIATION,
19 BOYLSTON PLACE,

Received March 25. 1889.
By Gift of Jas. Christie, M.D.
Glasgow. Scotld.

21. A. 195

THE

MEDICAL INSTITUTIONS OF GLASGOW

A HANDBOOK

PREPARED FOR

THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION HELD IN GLASGOW AUGUST 1888

COMPILED AND EDITED AT THE REQUEST OF THE LOCAL COMMITTEE

BY

JAMES CHRISTIE M.A. M.D. &c.

PROFESSOR OF PHYSIOLOGY AND LECTURER ON HYGIENE AND PUBLIC HEALTH
IN ANDERSON'S COLLEGE MEDICAL SCHOOL GLASGOW

GLASGOW

JAMES MACLEHOSE & SONS 61 ST. VINCENT STREET

Publishers to the University of Glasgow

1888

BOSTON MEDICAL
JUL 23 1889
LIBRARY ASSN.

746.

GLASGOW:
PRINTED BY ALEX. MACDOUGALL.

CATALOGUED.
E. J. C.

With the Compliments of the Editor.

Digitized by the Internet Archive
in 2010 with funding from
Open Knowledge Commons and Harvard Medical School

http://www.archive.org/details/medicalinstituti1888chri

Preface.

—o—

At a meeting of the Local Committee, held at the close of February last, the question as to printing a Guide Book to Glasgow and the surrounding neighbourhood was discussed; and it was finally resolved that, as a number of Guide Books would be published in connection with the International Exhibition, it would be preferable to publish a Handbook of "The Medical Institutions of Glasgow."

Dr. Joseph Coats, editor of the *Glasgow Medical Journal*, agreed to insert the various contributions in that Journal; an editor was appointed, and arrangements for the compilation of the volume were proceeded with.

The Editor was fortunate in securing the assistance of Dr. C. Fred. Pollock, whose aid has been invaluable. Possessed of high literary culture, great capacity for work, and the will to perform it, Dr. Pollock has, conjointly with me, carefully revised all the manuscripts and proofs; and, in addition, he has written valuable original articles.

It is hoped that the volume may be of service as a souvenir of the meeting of the British Medical Association; and also as a source of trustworthy information regarding "The Medical Institutions of Glasgow."

J. C.

Glasgow, *August*, *1888*.

PREFACE TO THE SECOND EDITION.

THE Second Edition of *The Medical Institutions of Glasgow* is the same as the First Edition, as regards matter; but differs from it in the number of illustrations.

As it was necessary that the Handbook should be issued, during the meeting of the Association, in August last, 2,000 copies were bound; but a quantity were left over for a future issue, when additional illustrations were procured.

These comprise Elevations and Block Plans of Anderson's College Medical School, the Royal Infirmary School of Medicine, the Royal Infirmary, the Victoria Infirmary, and the Barony Parochial Asylum, Woodilee; in addition to the University, the Western Infirmary, the Children's Hospital Dispensary, the City of Glasgow Hospitals, Belvidere, and the Royal Lunatic Asylum, Gartnavel.

These additional illustrations cannot but greatly enhance the value of the volume.

J. C.

1st March, 1889.

List of Contributors.

—o—

The Initials of the Contributors are affixed to the various Articles.

Thomas Barr, M.D., Surgeon, Ear Hospital.

Robert Blair, M.D., Physician-Superintendent, Barony Parochial Asylum, Woodilee.

James Christie, M.A., M.D., Editor of *The Sanitary Journal.*

A. C. Clark, M.D., Physician-Superintendent, District Asylum, Bothwell.

Joseph Coats, M.D., Editor of *The Glasgow Medical Journal.*

Alex. Duncan, B.A., Secretary, Faculty of Physicians and Surgeons.

A. Freeland Fergus, M.B., Assistant Surgeon, Eye Infirmary.

James Finlayson, M.D., Physician, Hospital for Sick Children.

Peter Fyfe, Sanitary Inspector, Glasgow.

D. N. Knox, M.A., M.B., Lecturer on Surgery, Western Medical School.

J. R. Motion, Inspector, Barony Parochial Board.

C. Fred. Pollock, M.D., Surgeon for Diseases of Eye, Anderson's College Dispensary.

Alex. Robertson, M.D., Consulting Physician, City Parochial Hospital and Asylum.

A. W. Russell, M.A., M.B., Superintendent, Western Infirmary.

James B. Russell, M.D., LL.D., Medical Officer of Health for Glasgow.

Samuel Sloan, M.D., Consulting Physician, Lying-in Hospital.

William Snodgrass, M.A., M.D., Muirhead Demonstrator of Physiology, University.

M. Thomas, M.D., Superintendent, Royal Infirmary.

W. R. Watson, L.R.C.P. and S.E., Physician-Superintendent, Govan Parochial Hospital and Asylum, Merryflatts.

J. R. Wolfe, M.D., Surgeon, Ophthalmic Institution.

D. Yellowlees, M.D., Physician-Superintendent, Royal Asylum, Gartnavel.

John Young, Inspector of Cleansing, Glasgow.

Contents.

PAGE

University, ... 1

Faculty of Physicians and Surgeons, ... 22

Anderson's College Medical School, ... 28

Western Medical School, ... 37

Royal Infirmary School of Medicine, ... 37

General Hospitals—

- Royal Infirmary, ... 42
- Western Infirmary, ... 56
- Hospital for Sick Children, ... 62
- Barony Parish Hospital, ... 72
- Town's Hospital, ... 74
- Govan Poorhouse, ... 78
- Victoria Infirmary, ... 78

Special Hospitals—

- Glasgow Fever and Small-Pox Hospitals, . . . 82
- Joint Hospital, ... 97
- Combination Fever Hospital, ... 98
- Lying-in Hospital, ... 98
- Eye Infirmary, ... 112
- Ophthalmic Institution, ... 116
- Ear Hospital, ... 117
- Lock Hospital, ... 120

Lunatic Asylums—

- Royal Asylum, Gartnavel, ... 122
- Barony Parochial Asylum, Woodilee, . . . 130
- City Parochial Asylum, ... 133
- Govan Parochial Asylum, Merryflatts, . . . 134
- District Asylum, Bothwell, ... 136

DISPENSARIES, &c.— PAGE
Dispensary for Skin Diseases, ... 137
Dispensary for Diseases of Chest and Throat, . . 137
Medical Mission, ... 138
Hospital for Diseases of Women, ... 139
Public Dispensary, ... 139
Anderson's College Dispensary, ... 140
Dental Hospital and School, ... 143
Polyklinik, ... 143
Samaritan Hospital for Women, ... 144
Ear Institution, ... 145
Cancer and Skin Institution, ... 145

POLICE DISTRICT SURGEONS, ... 146

AMBULANCE ASSOCIATION, ... 148

SANITARY AND CLEANSING DEPARTMENTS—
Sanitary Department, ... 151
Cleansing Department, ... 155

CONVALESCENT HOMES AND HOMES FOR INCURABLES—
Convalescent Home, Lenzie, ... 161
Mission Coast Home, Saltcoats, ... 162
Kilmun Sea-Side Home, ... 163
Convalescent Sea-Side Homes, Dunoon, . . . 164
Cottage Home for Convalescent Children, Helensburgh, . 166
East-Park Home for Infirm Children, . . . 167
Association for the Relief of Incurables, . . . 167
Colquhoun Bequest for Incurables, ... 169

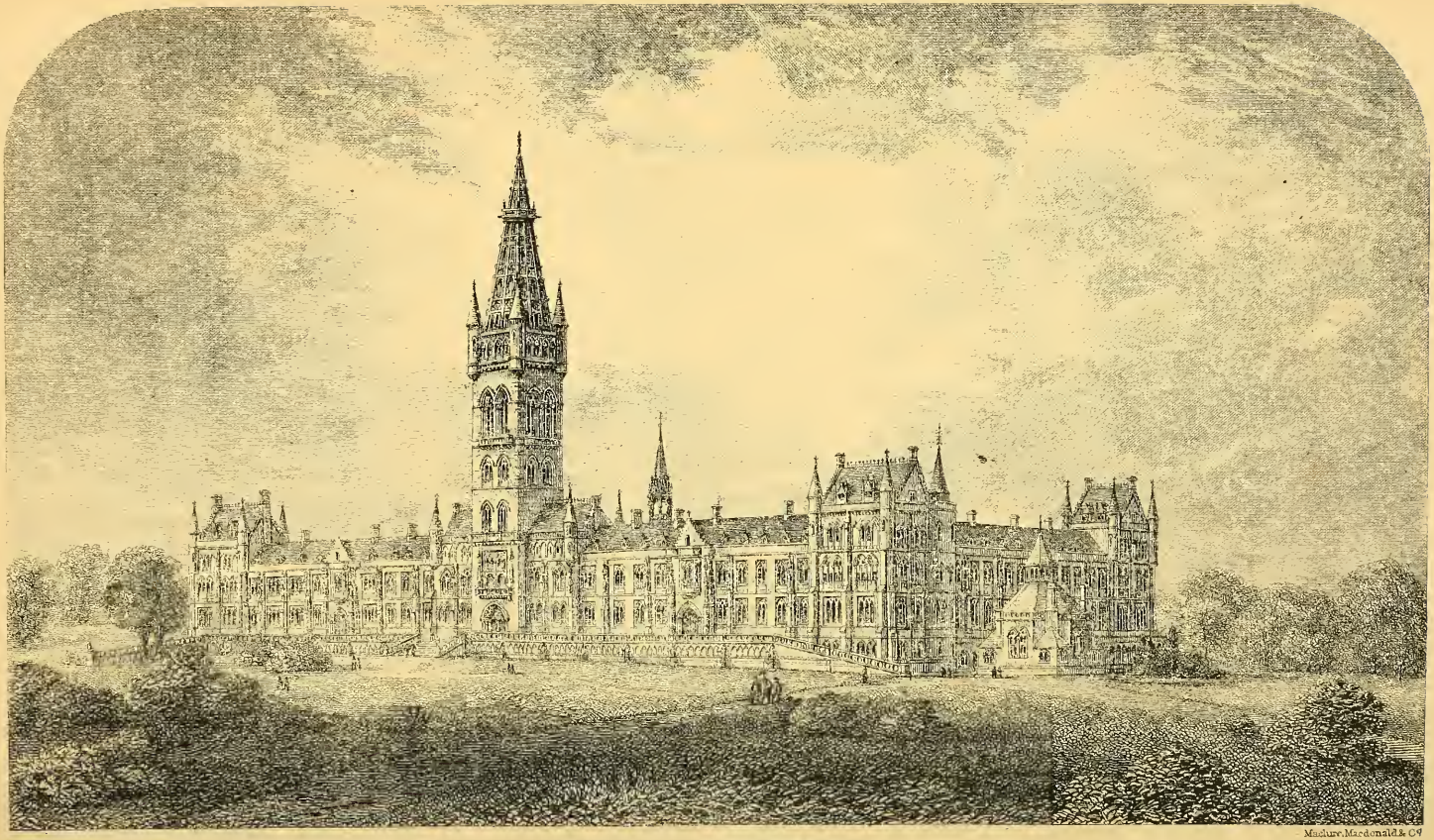
INSTITUTIONS FOR THE BLIND, AND THE DEAF AND DUMB—
Asylum for the Blind, ... 170
Mission to the Out-door Blind, ... 172
Institution for the Deaf and Dumb, . . . 172
Mission to the Deaf and Dumb, ... 174

INSTITUTIONS FOR THE TRAINING OF NURSES—
Training Home for Nurses, ... 175
Sick Poor and Private Nursing Association, . . 178

MEDICAL SOCIETIES—
Medico-Chirurgical Society, ... 181
Southern Medical Society, ... 183
Pathological and Clinical Society, ... 184
Obstetrical and Gynæcological Society, . . . 185
Branch of British Medical Association, . . . 185
Western Medical Club, ... 186

GLASGOW MEDICAL JOURNAL, ... 188

SANITARY JOURNAL, ... 190



Maclure, Macdonald & Co

GLASGOW UNIVERSITY

BOSTON MEDICAL
JUL 23 1889
LIBRARY ASSN.

The University, the Faculty, and the Medical Schools.

—o—

THE UNIVERSITY OF GLASGOW.

The foundation of the University of Glasgow was due to William Turnbull, Bishop of Glasgow, who, with the approval of King James II, applied for, and obtained from Pope Nicholas V, a Bull instituting in Glasgow a University or "Studium Generale" in Theology, Canon and Civil Law, and every other lawful Faculty. This Charter was granted on the 7th of January, 1450; and after taking into account the salubrity of the climate, and the general suitability of Glasgow as a centre of learning, it ordained that the doctors, masters, graduates and alumni should have like immunities and privileges to those enjoyed by the members of the University of Bologna, at that time one of the most celebrated of the Continental schools.

Bishop Turnbull and his successors in the Episcopal See were appointed Chancellors, and in 1451, a body of statutes having been framed, the corporate life of the University began. David Cadzow, Canon of Glasgow, was appointed Rector; and many members, chiefly ecclesiastics, were soon enrolled, drawn together by that spirit of inquiry which was then rousing the mind of Europe from the sleep of

the dark ages, and, no doubt, attracted likewise by the numerous privileges and exemptions granted to the University by King James II, in 1453.

According to the custom then prevalent in most of the leading seats of learning, all those connected with the University, academic staff as well as students, were divided into four groups or Nations, according to birth-place. These nations at their annual meetings considered all matters affecting their individual interests, and elected representatives, who, again, elected the Rector, and with him constituted a Council, whose duties were to guard the rights of the University, to attend to all matters affecting its status, and to preside as judges in all trials, civil or criminal, of its members. The Council was assisted by a Bursarius or treasurer, and by a Promotor or General Syndic, who saw that the statutes were obeyed, and that steps were taken to punish any infringement of them.

There were named in the Charter of foundation certain Faculties or "bodies of individuals competent and authorised to instruct in a particular department of learning." When properly constituted, a Faculty was presided over by a Dean and a Council of four deputies, chosen annually by the Faculty, and empowered to regulate the course of study, to examine candidates for degrees, and to present to the Chancellor for graduation those found duly qualified. From the absence of reference in the University archives to the transactions of the three higher Faculties of Theology, Canon and Civil Law, it would seem that these Faculties were not properly constituted in Glasgow University. No doubt we come across isolated notices of their existence. Thus, for example, we find that the Rector, in 1460, read the rubric in Canon Law, and that in the same year William de Levenax or Lennox began a course of lectures on Civil Law, and that, in 1521, Robert Lile, Bachelor in Theology, began lectures

on the fourth book of the Sentences; but beyond this we have no further information. The Faculty of Arts, on the other hand, whose course of study embraces those subjects which have always been regarded as the basis of a liberal education and an essential preliminary for those intending to devote themselves to the learned professions, had from the first a regular constitution, and took a leading part in University work. So much was this the case that the Dean of the Faculty of Arts came to be called simply the Dean of Faculties, and was looked upon rather as a general University official than as a representative of the Faculty of Arts alone. The Faculty of Medicine, now such a flourishing branch of the University system, was at first conspicuous by its absence, the only reference to medical matters in early times being the enrolment of Andreas de Garlies, Doctor in Medicinis, in 1469.

The teaching was in the hands of regents, many of whom were young men, for it was ordained that graduates should teach for two years after obtaining the degree of Master or Doctor. This rule, however, was never strictly enforced. Each regent was in the habit of conducting his students through the whole course of study prescribed by the Faculty, a custom which shows how different must have been the information then imparted from that deemed essential nowadays in every department of University work. A small fee, graduated according to the social position of the student, was expected, but poor students were allowed to attend free. The sum thus obtainable was so small that the regents had to depend on small chaplainries granted to the University, or they had rich preferments in the Church, which rendered them independent of fees or endowments. Celibacy was, of course, the rule at first, and even in later times we find it decreed that, "Inasmuch as *Women* are vain, frivolous, and gifted with an exceeding great Gift of Words, and by their Blandishments

are apt at times to distract the minds even of grave Professors, therefore these latter are strictly counselled *not* to marry: but in the event of their being compelled by untoward Force of Circumstances to chose between two Evils, they are prohibited on pain of removal from their Chairs from bringing their Better-halves within the College walls." *

The University was at first purely an examining body without buildings or endowments; but Arts students soon began to assemble for lectures in a building long known as the "Auld Pedagogy" or College, which probably formed part of the Bishop's property, and was situated on the south side of the Rottenrow. Lectures on Law were delivered in the monastery of the Predicant Friars (Black Friars), and possibly also in the Cathedral. In 1460, the University received as a bequest from James, first Lord Hamilton, a tenement on the site of the old College in High Street, together with four acres of adjacent ground, to which additions were gradually made by purchase and donation.

Here the students lived under strict supervision, rising at 5 o'clock in the morning, dining at a common table, retiring for the night at 9·15 P.M., and subject to a rigorous discipline that dispensed fines or corporal punishment for even trivial offences. The session lasted for ten months, and three and a half years were required to complete the curriculum. The main subjects of study, and the order in which they were taken were as follows:—Greek and Logic, Ethics and Mathematics, Physiology and Anatomy, Geology, Astronomy and Geography. In all these subjects the authority of Aristotle was paramount: "Absurdum est dicere errâsse Aristotelem" was an accepted maxim. The teaching of Latin was not introduced till 1637; but students were required to speak in Latin only, a knowledge of which they were expected to have acquired in the grammar schools—a usage which helps

* *Glasgow, Ancient and Modern*, vol. i, p. 616.

us to understand the somewhat barbarous character of mediæval Latin. "*Claude ostium, puer*," called a student to a classmate who had entered the lecture room without shutting the door; "*Claude os tuum, puer!*" was the professor's rebuke to the over-officious youth.

Three degrees were obtainable in Arts, that of Bachelor conferred by the Dean of Faculty after an examination, which was to be "not too easy nor too difficult;" and those of Licentiate and Master conferred by the Chancellor on the recommendation of the Dean, after examination, the writing of a thesis, and its defence in public disputation. The degree of Doctor was granted for proficiency in the subjects of the higher professions. "Academical degrees were considered as of Divine institution (probably because instituted by Popes, who were thought to be inspired by the Holy Ghost), and therefore the Chancellor or Vice-Chancellor conferred them, *auctoritate divina et in nomine Patris, Filii, et Spiritūs Sancti.*"*

Although many joined the University for some years after its establishment, yet the numbers seem to have gradually diminished, partly from the poverty of the University, and partly from the disturbed state of affairs caused in the earlier half of the 16th century, by the disputes leading up to the Reformation. The fortunes of the University were reduced to their lowest ebb, when, in 1560, by Act of Parliament, the Reformed Church was established in Scotland. The priests of the Church of Rome were deprived of their livings, and the Chancellor, James Beaton, Archbishop of Glasgow, fled to France, carrying with him all the more important documents, the mace and the insignia of the University. Thus, upon the mace, which was ultimately restored, is to be read the inscrip-

* *The Works of Thomas Reid, D.D.* (edited by Hamilton), vol. ii, p. 724.

tion: "Hæc virga empta fuit publicis Academiæ Sumptibus, A.D. 1465: in Galliam ablatam, A.D. 1560: et Academiæ restituta, A.D. 1590." The state of affairs is described in a quaint and expressive manner in a Charter of Queen Mary of the year 1560: "Forasmekil as within the citie of Glasgow ane College and Universitie was devisit to be, quhairin the youthe mycht be brocht up in letres and knawlege, the commoune welth servit, and verteu incressit—of the quhilk College ane parte of the schulis and chalmeris being bigeit, the rest thairof, alsweill duellings as provisioune for the pouir bursouris and maisteris to teche ceissit, sua that the samyn aperit rather to be the decay of ane Universitie nor ony wyse to be reknit ane establisst fundatioun." To remedy this condition, Queen Mary founded five bursaries for poor students, and presented to the University the buildings of the Blackfriars, with thirteen acres of land and the income therefrom. To this the Corporation of the city added, in 1572, the revenues of all the other disestablished Churches in Glasgow. Owing, however, to the vested rights of the ecclesiastics, we find that these donations gave an income of but £25 per annum, and that the members of the University, teachers as well as students, numbered only fifteen persons. But in 1577, James VI, by the advice of the Regent Morton, increased the revenues of the University by the gift of the rectory and vicarage of the parish of Govan, and framed for it a new charter which, from the great alterations it made, has been styled the "*Nova Erectio.*" According to this instrument, the functions of the Chancellor, Rector, and Dean, were left practically unaltered, but new dignity and authority were conferred upon the principal Regent, or Principal as he was now styled, who became a nominee of the Crown. The regents or professors, chosen by the Rector, no longer carried the students through the whole curriculum, but restricted

their teaching to a special branch of study. All previous rights, privileges, and immunities, were confirmed and continued to the University. To the *College* or *Faculty Meeting*, at which sat the Principal and Professors, was assigned the administration of the property and revenues, while general University business and matters of discipline were dealt with by the *University Meeting* or *Senate*, whose members were the Rector, the Dean of Faculties, the Principal, and the Professors. The students met with the Academic Staff in the *Comitia* for the election of the Rector, and to hear disputations and inaugural addresses. There was, in addition, a court known as the *Jurisdictio Ordinaria*, consisting of the Principal, the Professors of Humanity, Greek, Logic, Ethics, and Physics, and of the gowned or Arts students, for the exercise of discipline over junior students.

Under these more favourable auspices the University soon began to revive, and by the beginning of the 17th century there were about 100 students in attendance. The Chair of Medicine was founded in 1637, Robert Mayne being appointed Professor; but five years later we find it decided "anent the professioun of medicine, the visitation finds that professioun is not necessar for the Colledge in all tyme coming, but withal finds it just that Mr. Robert Mayne who is alreadie in that professioun continue in the same during his tyme." Numerous donations were received from the Crown, from private persons (noteworthy among these being a bequest from Zachary Boyd of £20,000 Scots, with all his library), and more especially from Cromwell during the period of his Protectorship. But with the Restoration the tide of fortune ebbed again, for, with the re-establishment of Episcopacy, the University was deprived of a large portion of its revenues, plunged into debt, and compelled to let fall into abeyance the Professorships of Theology, Humanity, and Medicine.

The Revolution brought better days. In 1693, the University received £300 a year out of the Bishop's rents, and, in 1702, it is recorded that there were 402 students of Theology, Greek, and Philosophy. In 1706, the Chair of Humanity was re-established, and, in 1708, a sum of £213, payable annually, was granted by Queen Anne, part of which was given to found a Professorship of Anatomy and Botany, and part for a Chair of Oriental Languages. In 1712, the Chairs of Medicine and Law were revived by the College, and endowed, in 1714, by Queen Anne. In 1727, it was enacted that the occupant of the Chair of Anatomy and Botany, Dr. Thomas Brisbane, should give a course of lectures on Botany, if at least five students desired instruction on that subject, and on Anatomy if ten students should present themselves. In 1744, William Cullen settled in Glasgow, and began to give courses of lectures on various branches of medical study, and his appointment to the Chair of Practice of Medicine, in 1751, added much to the importance of Glasgow as a Medical School, for his breadth of view, simplicity and clearness of style, and powers as a teacher of medicine, soon attracted students from all parts. Among these came Joseph Black, who afterwards became Professor of Anatomy and Chemistry, and, later, of Practice of Medicine, in Glasgow, and who by his discoveries as to the nature of carbonic acid gas, and the principle of latent heat, gained a distinguished place among the pioneers of modern science.

In 1788, the Medical Faculty received from the Rev. Dr. Walton, of Upton, Huntingdonshire, the sum of £400 to found a bursary for a medical student, and also a bequest of £1,000, which by subsequent accumulations has been increased to £2,250, to support a lecturer in any branch of medical science which the University might deem desirable. The Waltonian Lectureship is now held conjointly with that

upon Diseases of the Eye, instituted by the University in 1828; and the name of Mackenzie, the first lecturer, has a world-wide reputation. In the present century the School of Medicine has been greatly improved and extended in usefulness by the foundation of numerous Chairs—viz., Natural History (1807), Surgery (1815), Midwifery (1815), Chemistry (1817), Botany (1818), Materia Medica (1839), Institutes of Medicine or Physiology (1839), Forensic Medicine (1839), Clinical Surgery (1874), and Clinical Medicine (1874).

In the other Faculties, there have also been established during the present century Chairs of Civil Engineering, Conveyancing, English Language and Literature, Divinity and Biblical Criticism, and Naval Architecture.

In recent years the teaching staff of the University has been enlarged by the foundation of Lectureships in Geology, Public Law, Constitutional Law and History, and Insanity; of Demonstratorships of Experimental Physics, Civil Engineering and Mechanics, and Physiology; and of Assistantships to the Professors of Humanity, Greek, Mathematics, Natural Philosophy, Chemistry, Anatomy, Materia Medica, and Forensic Medicine.

For more than four centuries the University had its habitation in the time-honoured College in High Street. But with the wondrous commercial development of Glasgow, and the extension of the city far beyond its ancient boundaries, with the marked deterioration in the social tone of the district adjacent to the College, with the increasing number of students, and with the rapid advance of modern science, more especially in its physical and practical aspects, it became evident that removal to larger halls and purer air was necessary. In 1846, a Bill was passed for the purchase of the Old College and its grounds by the Monklands Junction Railway Company; but, owing to the inability of that Company to carry out the

scheme, the proposal fell through, and it was not till 1864 that the venerable pile passed into the hands of the City of Glasgow Union Railway Company. Thus has it come to pass that on the spot where James Watt perfected his improvements on the steam engine, the shriek of the steam whistle and the bustle of commerce have replaced the quietness and seclusion of the home that gave them birth.

"The funds at the disposal of the University to carry out the scheme of removal consisted of—(1) The produce of the sale of the old College and grounds, £100,000; (2) A sum of £17,500, consisting of the principal sum of £10,000, obtained by the University as compensation from the Monklands Junction Company, for non-fulfilment of their agreement, with interest since the time of payment; and (3) A sum of £21,400, promised by Her Majesty's Government in aid of the scheme of removal, conditionally on a further sum of £24,000 being raised by public subscription for the erection of a sick hospital in connection with the new University buildings.

"With these funds at their disposal, buildings might have been erected sufficient for the transaction of the ordinary business of instruction in the same manner as heretofore, and for the accommodation of the Library and Museum; but they must have been of the plainest design, and on a scale quite inadequate to provide for the future extension of the University.

"In these circumstances, the Senate resolved to make an earnest appeal for aid to the Government and to the public. This appeal was responded to in the most generous and gratifying manner. In a short time a sum of nearly £100,000 was subscribed, chiefly in the city of Glasgow; and the Government, appreciating the importance of the work, and the public interest it had excited, announced their intention to ask Parliament for the sum of £120,000, in six annual

instalments, on condition of a like sum being raised by subscription and expended on the buildings. This sum has now been paid out of the national Treasury, and the public subscription for the University buildings and the Western Infirmary has reached the large amount of £246,494, including £45,000 from the Marquis of Bute for the erection of the Bute Hall. From these funds a sum of £30,000 was allocated to the Western Infirmary.

"The efforts of the University being thus seconded in so gratifying a manner by the public and the Government, new buildings, designed by the late Sir G. Gilbert Scott, were erected on the grounds of Gilmorehill; and in these buildings the classes of the University met for the first time in Session 1870-71." *

But a few relics of the old building yet remain to link the past with the present. There is still the old stone stairway guarded by the lion and the unicorn which led up to the Fore Hall of the Old College, still the old bell † summons the students to their classes; and, within the last year, by the generosity of Sir William Pearce, part of the old building has been re-erected as a gateway and lecture room at Gilmorehill. A commodious edifice has recently been added for the Students' Union, the gift of Dr. John M'Intyre, Odiham, Hants, an old alumnus of the University.

While the seat of the University has thus been changed, its constitution has also been considerably modified. After much discussion and investigation, the Scottish Universities Act of 1858 was passed, and this has itself been modified in

* *Glasgow University Calendar, 1887-88.*

† Since the above was written, a new clock and chime of three bells have been placed in the tower. The largest bell weighs 60 cwt.; the second, 17 cwt.; and the third, 9 cwt. The bells chime the hours and quarters by a clockwork of modern design.

certain details by later enactments. The old distinction between the Faculty or College and the Senate has been done away with, and two new academic bodies created, viz.:—the University Court and the General Council.

The Chancellor is nominally the head of the University, and is elected for life by the General Council, of which he is the President. By him, or by the Vice-Chancellor in his absence, are conferred the academical degrees, and no change can be made in University regulations without his consent. He is represented by an Assessor in the University Court. The present Chancellor, elected in 1884, is the Right Hon. John Hamilton Dalrymple, Earl of Stair, K.T.

The University Court consists of the Rector and his Assessor, who may be regarded as the representatives of the students; the Principal and an Assessor, members of the Senate; an Assessor nominated by the Chancellor; an Assessor elected by the General Council, and so representing the Graduates; and the Dean of Faculties, elected by the Senate, who may be regarded as the representative of the public generally. The Court can review all decisions of the Senate, and change the internal arrangements with the Chancellor's sanction. It superintends the teaching and fixes the fees, and may after due investigation censure or suspend (with the approval of Her Majesty in Council) the Principal or Professors. It also appoints Assistant Examiners, and has the patronage of certain of the Chairs, and it acts as a final Court of Appeal in University matters. Its president is the Rector, who is elected triennially by the matriculated students, divided, as of old, into four nations. The Chancellor has the casting vote in the event of an equality of the nations.

The office of Rector dates back to the earliest days of the University, and among the many illustrious names to be

found in the list of Rectors may be mentioned those of Edmund Burke, Adam Smith, Francis Jeffrey, Lord Brougham, Thomas Campbell, Sir Robert Peel, Lord Macaulay, the Earl of Derby, the Earl of Beaconsfield, Gladstone, Bright, Fawcett, and Lushington. The Right Hon. the Earl of Lytton is the present Rector.

The Senatus Academicus, consisting of the Principal and the Professors, superintends the teaching and discipline, and administers the property and revenues of the University, subject to the approval of the University Court.

The Principal or Principal Regent of the College is the President of the Senatus Academicus and, *ex-officio*, a member of the University Court. According to the *Nova Erectio*, he was required to teach Divinity, Hebrew, and Syriac, and, although the Principal does not now engage in professorial work, it is still the custom to appoint a Churchman to the office. The present Principal and Vice-Chancellor is the Right Rev. John Caird, D.D.

The General Council consists of the Chancellor, the Members of the University Court and of the Senate, and the Graduates of the University. It meets twice a year, and can consider "all questions affecting the well-being and prosperity of the University, and make representations from time to time to the University Court, who return to the Council their deliverances thereon." In conjunction with the General Council of Aberdeen it returns a representative to Parliament. The present member, elected in 1880, is James Alexander Campbell, LL.D. There are at present upwards of 3,600 names on the list of Members of Council.

The Academic Constitution as above described, while an improvement upon the former arrangement, has been found in some respects defective, and numerous proposals have been made for its amendment. A Bill which, if it becomes

law, may lead to sweeping alterations in the present University system, has been introduced in the present session of Parliament. The main changes it proposes are the enlargement of the University Court, so as to secure fuller representation of the graduates and general public, and the transference to it from the Senate of the financial administration of the University. It also provides for the appointment of Commissioners, who are to have power to deal with all the internal arrangements of the University, and, if thought desirable, to affiliate with the University any duly incorporated and endowed college, whose governing body will send representatives to the University Court.

While our University system has thus been altered to keep pace with the rapid strides made in science and general enlightenment during the last half century, the number of students has likewise varied to a remarkable extent. Previous to the year 1830 there was no official record of all the students annually enrolled. At the beginning of the 19th century there were about 700 students in attendance, but this number rapidly increased, especially on the medical side, on account of the need of surgeons for the Army and Navy for the contest then being waged with Napoleon Buonaparte. Some exceedingly suggestive figures illustrative of this point were given by Professor George Buchanan in his address to the Medico-Chirurgical Society of Glasgow in 1881.* Taking the numbers in the Anatomy class as a criterion of the number of medical students, he points out that "in the four years, 1811, 1812, 1813, 1814, the numbers of Anatomy students in the University alone, were respectively 259, 280, 352, 254; while in 1815, after the peace following the battle of Waterloo, they went down suddenly to 166. Again, at the period of the Crimean War, in 1855, in the two schools of the University

* See *Glasgow Medical Journal*, 1881.

and the Andersonian there were 310 students of Anatomy." What the late Dr. Allen Thomson has called a "New Regulations Panic" now began to affect the Medical School. "The numbers of Anatomy students in Glasgow, from 1855 onwards, in consecutive years, were—310, 342, 381, 401, 416; while in 1861 and 1862 (the first years of the pressure of new regulations) the total numbers again fell to 284 and 287." As the medical curriculum requires attendance on classes for a period of four years, during the first two of which it is customary to take anatomy, the number of medical students in Glasgow during the above mentioned years may be roughly estimated as double that of the numbers given as studying anatomy.

The following table brings out into remarkable prominence how rapidly during the last decade the Medical School of the University has advanced in numbers and popularity:—

Year.	Students in Arts.	Students in Medicine (including Summer Matriculation).	Students in Arts and Medicine.	Total of Matriculated Students.*
1861-62	691	283	...	1,140
1870-71	772	320	...	1,279
1871-72	817	349	...	1,349
1872-73	742	346	...	1,258
1873-74	805	342	...	1,333
1874-75	904	367	...	1,484
1875-76	942	415	...	1,601
1876-77	1,113	435	...	1,773
1877-78	1,243	492	...	2,018
1878-79	1,327	501	...	2,096
1879-80	1,380	539	21	2,235
1880-81	1,406	563	29	2,304
1881-82	1,331	624	25	2,320
1882-83	1,307	624	20	2,275
1883-84	1,183	633	28	2,212
1884-85	1,196	679	36	2,261
1885-86	1,158	694	36	2,241
1886-87	1,118	743	50	2,260
1887-88	1,074	774	38	2,188

* Faculties of Divinity, Law, Arts, and Medicine.

Thus we see that immediately after the removal to Gilmorehill the number of students was greatly increased, that

in Arts there were as many as 1,406 in the year 1880-81, and that this number has gradually diminished; while on the other hand, there has been a steady and uninterrupted increase in the number of medical students, until there are now more than twice as many as enrolled in 1870-71. In the present spring more candidates have come forward for the preliminary medical examination in general education than upon any previous occasion, and this may perhaps be taken as an indication that the wave of progress has not yet reached its height. The reasons for this increase are probably various. No doubt we are beginning to experience the effects of the increasing enlightenment and desire for a professional career, caused by the passing of the Education Act of 1872. Many of our young men were at first required to fill the ranks of the teachers, and this want having been satisfied, they are turning their eyes to other branches of learning. The extended class-rooms, the improvements in apparatus and the means of practical teaching, the numerous bursaries and scholarships for the support of students during their curriculum, the attraction of the University degrees, and the beautiful and healthy site of the College, have all probably contributed to increase—perhaps also at the expense of other less favoured educational institutions in the city—the numbers of the University students.

While it has long been customary in Scotland to provide bursaries for deserving students at the University, yet till recently these have been almost entirely devoted to students of the Faculties of Arts and Theology. Thus for students in Arts there are about two hundred bursaries of a total annual value of about £5,000; for students in Theology over thirty bursaries of an annual value of about £900, and for students of Arts and Theology together, about as many as for Theology alone. Owing to the prominence in late years of the Medical

Faculty, the generosity of benefactors has been turned to the assistance of the medical students, and there are now about twenty bursaries in the Faculty of Medicine of an annual value of about £500. Bursaries are usually awarded by public competition, and are held on an average for three or four years, and so help the student during the greater part of the time he is attending the classes of any one Faculty. Nearly £8,000 per annum are thus devoted to the assistance of meritorious students. In addition to this there are Scholarships, Fellowships, and Prizes of the value of about £2,500 per annum, with the help of which distinguished students may find leisure to make a more profound study of the higher branches of learning.

The impetus given to the Medical School by the teaching of such men as Cullen, Black, and the Hamiltons in the Chair of Anatomy was checked to a certain extent by the want of suitable clinical teaching. This was met, however, by the opening, in 1794, of the Royal Infirmary, where the students had abundant material for clinical purposes. As a consequence of the rapid and extensive growth of the western part of Glasgow and its adjoining suburbs, it became evident that an infirmary near to the new University buildings was necessary, and accordingly the Western Infirmary was built with accommodation for about 400 surgical and medical patients, and provided with wards for skin diseases and diseases peculiar to women. The Eye Infirmary, the Dispensaries for Diseases of the Skin and Ear, the Royal Lunatic Asylum at Gartnavel, and the Fever Hospital at Belvidere afford facilities for students desirous of studying particular branches of medical science.

Another aid to the medical student is the Museum founded by the celebrated Dr. William Hunter, who had been a student at Glasgow, and always displayed the warmest

interest in the welfare of his *Alma Mater*. He bequeathed to the University "his valuable collection of books, manuscripts, coins, paintings, anatomical preparations, zoological and mineral specimens, and archæological relics, and appropriated £8,000 for the erection of a building for their reception and preservation." The collection has been added to from time to time, and is now to be seen in the buildings at Gilmorehill. The geological section has been recently enriched with a very valuable collection of minerals and precious stones made by the late F. A. Eck, Esq.

For students of Medicine, there existed in the old College grounds, a plot laid out as a Botanical garden. This becoming, however, inadequate for the requirements of the students, the University, together with the people of Glasgow, bought a piece of ground, fitted it out as a botanical garden, and provided it with a lecture room for the students. Here, under the supervision of such eminent botanists as Dr. Graham and Sir W. J. Hooker, an exceedingly valuable collection of plants was made and used for class purposes. With the growth of the city the garden was moved farther from business centres, and the beautiful grounds on the banks of the Kelvin were acquired, part of which was specially reserved for the students, and laid out with beds containing specimens of the leading varieties of plants. It was intended also that lectures should be delivered at the garden; but the numbers of Botanical students increased so rapidly that the Professor of Botany has in recent years been compelled to have his class room and laboratory at the University, and to have his material brought thither from the gardens.

Mention should also be made of the University Library, a collection of over 130,000 books and manuscripts, which have been accumulating since the 15th century. Many old, rare, and valuable books are here to be found, most of which

belonged to special collections bequeathed and presented from time to time to the University. Among these may be specified the unique collection of medical books, &c., bequeathed to the University by William Hunter; the library of the late W. Ewing, Esq., which contains one of the most complete collections of Bibles extant, together with many early editions of books; and that which belonged to the late Sir William Hamilton. This latter "collection, which consists principally of classics, editions of Aristotle, and treatises on Logic and Metaphysics, was purchased by private subscription, and presented to the University." Additions to the library are being constantly made, partly by donation and partly purchased by the grant of £707 per annum, received from the Treasury as compensation for the loss of the Stationers' Hall privilege.

Three medical degrees are conferred by the University of Glasgow. These are—Bachelor of Medicine (M.B.); Master in Surgery (C.M.); and Doctor of Medicine (M.D.) All of these qualify for practice throughout the British dominions, and for admission to the Army, Navy, and Public Medical Service. There is also a qualification in Public Health which may be obtained, after examination, by registered medical practitioners.

The degrees of Bachelor of Medicine and Master in Surgery must be taken together, and "the candidate for these degrees must have been registered in the books of the General Medical Council at least four years prior to the date of his graduation." An examination in General Education, or other equivalent examination, must be passed prior to registration. The curriculum lasts for four years, the "*annus medicus* being constituted by attendance on two courses of not less than 100 lectures each, or on one such course with two three months' courses of not less than 50 lectures each." There are

four professional examinations for the degrees of M.B. and C.M., the first, on Chemistry, Botany, and Natural History; the second, on Anatomy and Physiology; the third, on Regional Anatomy, Materia Medica, and Pharmacy; and the fourth, on Surgery, Clinical Surgery, Medicine, Clinical Medicine, Pathology, Midwifery, and Medical Jurisprudence. It may be mentioned, in passing, that although Pathology is one of the subjects of professional examination, there is no Chair of Pathology in the University.

The degree of Doctor of Medicine may be obtained by Bachelors of Medicine of two or more years' standing, who must be at least 24 years of age, have complied with the regulations as to General Education, and have given in a suitable thesis on some subject connected with Medical Science.

Before bringing this brief notice of the University to a close, it seems fitting to make reference to some of the more distinguished men who have graced the professorial chairs, or who, having been alumni of the University, have risen to eminence in after life.

Of former Professors of Divinity there may be mentioned John Mair, whose learned prelections drew students to Glasgow from all parts of Great Britain and the Continent; James Wodrow, the historian; Zachary Boyd, and Principal Gillespie who did so much towards the completion of the old College buildings.

Among the Arts Professors have been numbered Adam Smith, author of *The Wealth of Nations*, whose originality of mind and acuteness of intellect attracted many to hear his lectures on Logic, Rhetoric, and Ethics; Francis Hutcheson; Dr. Thomas Reid, founder of the "Scotch School" of Philosophy; Dr. Simson, the Mathematician; William Ramsay, Sir Daniel K. Sandford, and Edmund L. Lushington,

so famous for their classical attainments; and the present occupant of the Chair of Natural Philosophy, Professor Sir William Thomson, who, by his broad mathematical and physical generalisations, and, in especial, by his discoveries and inventions in the realm of electricity and submarine telegraphy, has gained an undying name in the annals of science.

The names of Cullen and Black have already been referred to in speaking of the rise of the Medical School; and in addition to these should be mentioned those of Dr. John Burns, author of a valuable treatise on the Principles of Surgery, and of many papers on the diseases of women; of Dr. Thomas Thomson, the distinguished chemist who, among other services to science, introduced the use of symbols in chemistry, made popular Dalton's atomic theory, and did much to put chemical facts upon a quantitative basis; of Dr. Andrew Buchanan, whose discoveries as to the coagulation of hydrocele fluid led to our present knowledge of the nature of the coagulation of blood; of the late Dr. Allen Thomson, the distinguished anatomist and comparative embryologist; of Sir Joseph Lister, and of Dr. Gairdner, the present President of the British Medical Association.

George Buchanan, the celebrated wit and historian was an alumnus of Glasgow; and among others may be mentioned Dr. Matthew Baillie, a leading anatomist and physician of his time, Gibson Lockhart, the son-in-law and biographer of Sir Walter Scott, Campbell, the poet, and the late Archbishop Tait.

For fuller information regarding the University, the reader may consult the following books:—*Munimenta Almæ Universitatis Glasguensis*, published by the Maitland Club in 1854; *Glasgow, Ancient and Modern*, edited by J. F. S.

Gordon, D.D.; *Glasgow, Past and Present*, by J. Pagan; *A Statistical Account of the University of Glasgow*, by Dr. Thomas Reid; the Preface, by John Barras Hay, to a volume of *Inaugural Addresses of Lord Rectors*, published in 1839; *Memorials of the Old College of Glasgow;* and the *Glasgow University Calendars*, published by James Maclehose & Son, Publishers and Booksellers to the University.

W. S.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

The Faculty Hall is situated at 242 St. Vincent Street, and contains a Library, a Reading Room, a Hall for meetings of the Faculty and for examinations, with a number of accessory rooms. The use of these rooms is granted by the Faculty to most of the medical and some other scientific societies, including the Medico-Chirurgical, the Pathological and Clinical, and the Obstetrical and Gynæcological Societies. The Reading Room, which contains nearly all the British and a selection from the foreign medical periodicals, is open to Fellows, and also to Medical Officers of the Army and Navy, and medical men temporarily resident in Glasgow, on their being introduced to the Librarian, and having their names entered in the Album. The Library, which is open for lending to Fellows, and for consultation purposes to all members of the medical profession, was begun in 1697, and consists of about 26,000 volumes, for only about a third of which is there accommodation in the room set apart for the purpose. A Catalogue of the books was printed in 1885, containing an index of subjects, and additions since that date are entered on a Card Catalogue, the index of subjects being kept up to date.

The number of Fellows is now about 180, two-thirds of them being resident in Scotland, and admission to the Fellowship is obtained by examination. The first examination embraces Anatomy and Physiology, and the second, Pathology and Surgery or Medicine. The age of admission is not less than 24. Candidates who have been doubly qualified for ten years are examined on Surgery or Medicine, and one other subject selected by them from a given list. The Faculty retain the power of electing two Fellows of distinguished reputation annually without examination, but none has yet been admitted under this rule. Honorary Fellowships are occasionally conferred.

The Licence of the Faculty is now, except in the cases to be mentioned presently, granted only in combination with the Licences of the Royal Colleges of Physicians and Surgeons of Edinburgh. This is in accordance with the provisions of a special agreement made between the three bodies in 1884; and, of the six examinations held annually under this scheme, two take place in Glasgow. A graduate in Medicine of a British or Colonial University, or a Licentiate in Medicine of a College of Physicians, can still, however, be admitted to the examination for the single Licence. In addition to the Licence, the Faculty also grant a Qualification in Public Health; and they further confer a Licence in Dental Surgery.

The Faculty was founded in 1599, by Charter granted by King James VI in favour of Dr. Peter Lowe, a surgeon, Dr. Robert Hamilton, a "professoure"—that is, practitioner "of medicine," and Mr. William Spang, an apothecary. It was to the influence of the first named of this trio, whose portraits are in the Faculty Hall, that the Faculty owed its foundation. Dr. Lowe was a man of great mark, probably the

most famous surgeon and foremost writer on surgery of his day in this country. Before settling down to practice in Glasgow, about 1597, he had spent thirty years of his life on the Continent as an army surgeon, and had risen to the rank of Ordinary Surgeon to Henry IV of France. His contributions to the literature of the profession consist of *An Easie, Certaine, and Perfect Method to Cure and Prevent the Spanish Sicknes* (London, 1596), a little work on syphilis, as its title indicates; *The Whole Course of Chyrurgerie* (London, 1597), which went through four editions, the last of which was published in 1654; and a translation of the Prognostics of Hippocrates, being the earliest attempt to give in an English garb any portion of the works of the Father of Medicine.

Dr. Lowe was appointed one of the Surgeons to the Scottish King and Surgeon-in-Chief to the heir-apparent. When he took up his residence in Glasgow it was a town of only about 7,000 inhabitants, and certainly gave no indication of one day becoming the second city of the empire; and among its citizens he held a leading position till his death, in 1612. Visitors to the Cathedral, just before they emerge from the High Churchyard into the street, may have their attention drawn to Dr. Lowe's tombstone, just within the gate, and may read its quaint inscription.

Lowe scarcely lived long enough to see the institution which he had founded take its destined place in the West of Scotland. The territorial limits over which it had power embraced the western counties of Lanark, Renfrew, Dumbarton, and Ayr; and being granted to a surgeon, a physician, and an apothecary, the charter conferred special privileges as regards the practice of Surgery, Medicine, and Pharmacy. In the domain of Surgery the jurisdiction of the Faculty was exclusive. They had the power to examine and license all

practitioners of Surgery within the bounds; to cite before them all unlicensed persons; to inflict a fine on such; and in default of payment to "poind" or sequestrate their goods if they had any, and if not, to compel the magistrates to incarcerate them till they had found security. As regards Medicine their function was to inhibit from practising as Physicians all persons other than Doctors of Medicine of the Universities. In respect to Pharmacy they had the authority not only to license Pharmacians, but to inspect drugs sold within the city. They had several other powers and privileges, to which we cannot advert; but it is worthy of note that several provisions of the charter were obviously taken from the constitution of the College of St. Côme, the Paris College or Confrairie of Surgeons, of which Lowe was a member; and the name of the Corporation was probably taken from the Paris Faculty of Medicine.

Anomalous as a body, constituted as we have described, to some extent was, it probably in that age still more deviated from the general rule, in so far as no place was by the charter assigned to barbers in the Corporation. But at one of the earliest meetings the members made provision, by a bye-law, for a kind of modified admission of barbers "as a pendicle of Chirurgerie," from the ordinary practice of which they were rigorously prohibited under penalties. In 1656 the Surgeons of the Faculty and the barbers obtained a "seal of cause" incorporating them into a city guild. There was thus established a dual incorporation—on the one hand of the Physicians and Surgeons under Royal Charter, on the other of the Surgeons and Barbers under the "seal of cause." This led to complications of various kinds, till the ill-starred union between the Surgeons and Barbers, after many years of bickering between the two parties, was terminated by mutual consent in 1719.

The first Faculty Hall was erected in 1697 in Trongate, immediately to the west of the Tron Steeple. This was succeeded, in 1790, by the hall in St. Enoch's Square, which remained the premises of the Faculty till they acquired their present building, about 1860.

The earliest medical teaching in Glasgow was given directly under the auspices of the Faculty. It was one of the stated functions of the "Visitor"—that is, the President of the Surgeons (the President of the Physicians being styled "Præses"), to give systematic instruction to the apprentices of the surgeons, whose professional knowledge was regularly tested by examinations during the currency, and at the end of their term of pupilage. On their passing the final examination they were admitted as "masters" or "freemen of the calling." The few physicians resident in Glasgow had received their education and degrees at foreign Universities, generally those of Holland.

All the men associated with the origin and rise of the Glasgow Medical School were members of the Faculty, and all of them attained to the office of either Præses or Visitor. In 1744, William Cullen, who had been a surgeon's apprentice in Glasgow, and subsequently in practice in his native town of Hamilton, returned to the city, and by instituting courses of Lectures, first outside and latterly within the University, laid the foundation of the school—a foundation which was worthily built upon by Joseph Black, the three Hamiltons, Alexander Stevenson, William Irvine, Charles Hope, Robert Cleghorn, and others in the last and a host of distinguished names in the present century. These men were not less closely identified with the Faculty and its business, than were the medical lecturers in Glasgow who last century taught outside the University. Extra-academic teaching, it is true, was during that period only

occasional. In 1764, Dr. Andrew Morris, a graduate of the University of Rheims, practising in Glasgow, editor of an edition of Celsus, lectured on Medicine in the Faculty Hall, and Mr. James Monteith lectured on Midwifery from 1778 for some years; but the era of continuous extra-academic medical teaching in Glasgow dates from the establishment of the Medical School of Anderson's College (first named Anderson's University), at the end of last century and of the College Street Medical School at the beginning of the present.

During the first forty years of the present century, the career of the Faculty was chequered by an unfortunate series of law-suits in which they became involved, first with the University graduates in medicine, and latterly with the University of Glasgow itself. The matter in dispute was the right of the graduates to practise surgery within the Faculty's bounds. The decisions, first as regards the degree of M.D., and subsequently of C.M., were uniformly in favour of the exclusive jurisdiction of the Faculty. But these cases dragged themselves so slowly from court to court, that before the final case was decided on appeal in the Lords in 1839, the Faculty had to a large extent tacitly abandoned their exclusive territorial privileges, which they found it impossible to maintain under pressure from the large increase in the number of Doctors of Medicine, who had no alternative but to betake themselves to general practice. Prior to this influx of medical graduates, Doctors of Medicine in Glasgow practised only as physicians.

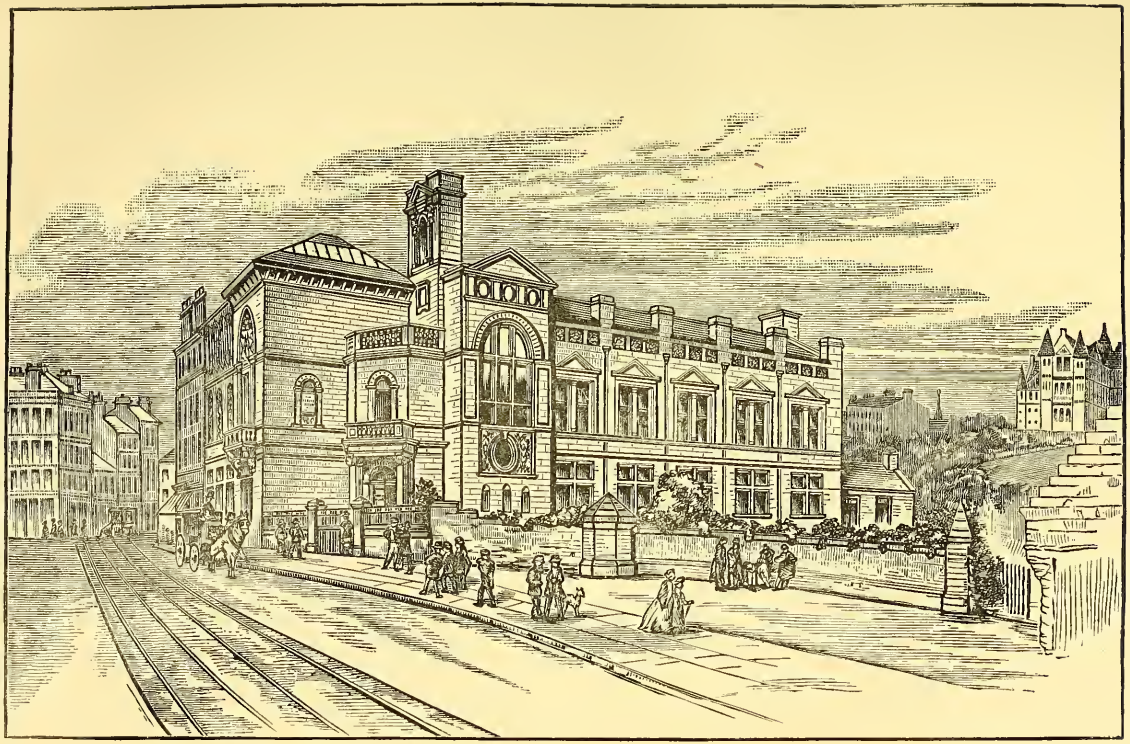
By an Act of Parliament, passed in 1850, several changes were effected in the constitution of the Faculty, the most important of them being the disjunction from the Corporation of a Widows' Fund, instituted in 1792, which had latterly, from the high fees it necessitated to be exacted from entrants, proved injurious to the expansion of the

Faculty. The passing of this measure was at once followed by a steady increase in the number of Fellows. The institution of a stringent examination test for entrants has necessarily operated in diminishing the number of candidates for the Fellowship. The number of Licentiates has, however, been much increased under the operation of the conjoint scheme of examination.

A. D.

ANDERSON'S COLLEGE MEDICAL SCHOOL.

John Anderson, M.A., F.R.S., the ingenious and energetic founder of this college, and the pioneer of all Mechanics' Institutes, was born in 1726 and died in 1796. His birthplace was the manse at Roseneath, in Dumbartonshire, where his father, the Rev. James Anderson, was parish minister. On the death of his father, in 1733, the boy was sent to an aunt in Stirling to receive his school education; and he afterwards studied at the University of Glasgow, where he seems to have had a brilliant career; for in 1755, when 29 years of age, he was appointed Professor of Oriental Languages there, and, two years later, was transferred to the Chair of Natural Philosophy. This was the right man in the right place; for he at once proceeded to extend the knowledge of his subject to those who had a strong but hitherto neglected claim for such instruction—the mechanics of the town, whom he visited in their workshops, mastering the details of the various trades, and, by his explanations and advice, encouraging the operatives to acquire an insight into the principles involved in their work. Glasgow was then a town of over 23,000 persons, with factories which might almost be counted on the fingers, and it was to the limited number of workers



ANDERSON'S COLLEGE MEDICAL SCHOOL.

in these that Anderson appealed by opening for them, on Tuesdays and Thursdays during the session, a class on Experimental Physics, illustrated by many experiments, and requiring no familiarity with mathematics. This unique class he continued to conduct with fervour and success for nearly forty years, till the close of his life. Among the mechanics who came under his influence was James Watt. Educated in Greenock and trained in London, Watt tried to start business in Glasgow as a mathematical and philosophical instrument maker: but was prevented, as a non-member, by the Guild of Hammermen. Rejected by the hammermen, he was protected by Anderson, at whose instigation and that of another friend (Professor Muirhead), he was employed by the University as mechanician within their own walls; and according to Williamson, his biographer, he found in Anderson an "early and attached friend, whose house, conversation, library, and valuable scientific apparatus had been at all times free to satisfy the strongly awakened exigencies of that inquisitive and ingenious mind." Anderson required to have a model of Newcomen's steam engine repaired, and it was while working at this that Watt found the impulse which led to his great invention.

In 1786 Anderson published a volume, entitled *Institutes of Physics*, and, besides contributing articles to the periodicals of the day on natural science, antiquities, and the military art, he gradually made a private collection of scientific apparatus, natural history specimens, and curiosities, which ultimately formed the nucleus of the Andersonian Museum. In 1791 a new form of gun carriage was invented by him, the recoil of the gun being stopped by the condensation of air within the carriage; and about that time he aided the French in a postal difficulty by suggesting the idea of a balloon post. The German Government, alarmed at the

spread of Republican opinions, had forbidden the importation of French newspapers and similar literature, and endeavoured to enforce the prohibition by an armed barrier along their frontier; but the successful execution of Anderson's suggestion overcame the impediment.

When 70 years old he died, and the whole of his property —under £1,000 in all—was bequeathed, "except what is in the painted chest with three locks, . . . to the public, for the good of mankind and the improvement of science, in an institution to be denominated 'Anderson's University,' and to be managed by 81 trustees." The trustees were of nine classes, and the institution was incorporated by a seal of cause, or charter, from the Magistrates and Council of the city shortly after Anderson's death in 1796. There were to be the four Faculties of Arts, Medicine, Law, and Theology; but the last two were never formed, and the history and extensive development of the first need not be traced here. The proposed nine medical chairs were those of Institutes or Theory of Medicine, Practice of Medicine, Anatomy and the Theory of Surgery, Practical Surgery, Obstetrical Art, Materia Medica, Clinical Cases, Botany, and Natural History. Chemistry was included in the Arts, and the completeness of the scheme is in striking agreement with the requirements of the curriculum now deemed essential. In addition, he wished to have an elementary school or academy, and directions were given for the popular teaching of science, a "Ladies' Course of Physical Lectures" being mentioned, because he desired that the young ladies of Glasgow might have an opportunity for a small sum of becoming "the most accomplished ladies in Europe."

Two rooms in the Grammar School, George Street, were at once secured for class purposes, and a house in Duke Street was taken for the museum and library. From obvious want

of funds the institution began in a very small way, in 1796, with a single lecturer on Natural Philosophy and Chemistry. This was Dr. Thomas Garnett, who gave lectures daily during the session on Arts and Manufactures in George Street, and twice a week delivered popular courses on Natural and Experimental Philosophy and on Chemistry in the Trades' Hall, in Glassford Street, achieving such a success that in 1797 the number of students is returned as 972. He was the first person to have his child vaccinated in the city, the inoculation being performed on 30th May, 1799, with vaccine matter procured from London, when the child was six months old. In that year Garnett removed to London as the first Professor in the Royal Institution of Great Britain, which had been constituted on the model of the Andersonian Institution.

He was succeeded by Dr. George Birkbeck, who started a class in 1800 expressly for mechanics, which seems to have been the first of the kind ever established, and was taught at the beginning gratuitously, and afterwards at a very moderate rate of admission. He left Glasgow in 1804 for London, where he had a share in founding the London Mechanics' Institution, a means of teaching the working classes, which, having received its original impetus from Anderson's hands in Glasgow, rapidly multiplied all over the country after 1823, the Glasgow one being originated in that year by a number of students from Anderson's University, with Birkbeck as President.

In 1804 Dr. Andrew Ure took up the Andersonian work, and continued the progressive improvement of the Institution by the introduction of a course of lectures on Chemistry and Pharmacy. He also promoted the establishment of a library for the evening classes, and held office till 1830, when the chair was divided—Thomas Graham being elected Professor

of Chemistry, a post on which he shed lustre for seven years by the commencement of laboratory instruction and by the enormous amount of valuable original research, which gave him a European fame, and led to his appointment in 1836 as Professor of Chemistry in University College, London, and after that as Master of the Mint.

From an early period the Institution had buildings of its own, for in 1798 the Flesh Market, on the west side of John Street, was purchased and fitted up properly by some friends, who subsequently, in 1806, transferred it to the trustees for £2,000. It was here that the Medical School was started in 1799, John Burns—son of Dr. Burns, of the Barony Church, and afterwards author of a work on Midwifery and other publications—who had been nominated in the will of the founder as Professor of Anatomy and the Theory of Surgery, being appointed to lecture on Midwifery and the Diseases of Women and Children and on the Principles of Surgery. The Professorship of Anatomy and Surgery he resigned in 1815, and one of his successors was William Mackenzie (1819), the celebrated oculist, who came recommended from London, was made Waltonian Lecturer on the Diseases of the Eye in Glasgow University in 1828, and published his *Practical Treatise on Diseases of the Eye* in 1830. He, again, was followed in the Surgery chair by Dr. James Adair Lawrie, who ultimately succeeded Burns in the similar chair in Glasgow University in 1850. Anderson's College has been to some extent a nursery for the medical professors of Glasgow University. Of the dead it has supplied nine; of the living it has supplied six.

A Lecturer on Botany was appointed in 1816, and one of those who subsequently held this professorship (1863-77) was Roger Hennedy, whose *Clydesdale Flora* is valued in the district.

The institution, before long, felt cramped for want of room,

the buildings occupied by it being found inadequate for its purposes and growth, and in 1819 a resolution was passed to appeal to the public for funds, by a circular, in which there is the proud statement that "it is the only seminary in Europe in which the doors of science are thrown open to the artizan, of whom 500 are annually instructed in the application of mechanical science to the useful arts." Nothing definite, however, was done till 1827, when the building in John Street was sold to the Bank of Scotland for £4,700, and the old Grammar School on the north side of George Street was purchased for £3,000. In 1828-29 the removal of the institution took place to the new premises, which had been greatly altered, and embellished, and prepared, though in later years they required extensions and re-arrangements. In 1832 they were insured, with their contents, for £7,000; but subsequent enlargements increased their usefulness and value, and in the minutes of 1834 it is mentioned that they were erected at a cost of upwards of £9,000. Further enlargements in after years gave them their present condition.

On commencing work in George Street, the institution assumed the name, bestowed upon it by the founder, of "Anderson's University," and a number of new professors were added to the staff, a much more complete course of lectures and demonstrations in medical science being arranged; for in 1828 Dr. Robert Hunter came from another medical school which then existed in Portland Street, where he had a dissecting room, as Professor of Anatomy and Physiology, Dr. James Armour was elected Professor of Midwifery and Medical Jurisprudence, Dr. A. Hannay was appointed Professor of the Theory and Practice of Medicine, and the professorship of Materia Medica was filled by Dr. Andrew Buchanan, who passed to the Physiology Chair in Glasgow University in 1838, but made his enduring mark in biological

science while connected with Anderson's College, by publishing his discoveries and views regarding the coagulation of the blood, which now receive their proper recognition. A Chair of Medical Jurisprudence, separated from that of Midwifery, was founded in 1831, in which year also a teacher of "Medical Latin" was appointed, and a similar division of another chair occurred in 1840, when a professorship of Physiology, distinct from Anatomy, was instituted.

In 1832 one of Anderson's ideas was revived, it being proposed that the university should grant the degree of "M.D., A.U.G.," and try to obtain a Royal Charter of Incorporation, and in connection with this movement the medical professors drew up a statement of their position and views. From this we learn that the School was, in 1834, one of three extra-mural medical teaching bodies, the other two being the smaller one in Portland Street and the very much smaller one in College Street, and that it was even more fully equipped with teachers than the Glasgow University itself, all the necessary subjects being taught, and there being a Professor of Medical Jurisprudence and Police and a Teacher of Anatomical and Pathological Drawing. The number of students at the Institution is given as 1,249, the majority of these attending the medical classes, for the returns of the latter show 590 at the winter session of 1832-33 and 173 at the summer session of 1833, the lectures being the same in the winter and summer courses. Large numbers of the students at the Glasgow University are stated to attend some classes in the Andersonian.

Anderson's University thus became one of the important medical schools in the country, many of the most distinguished physicians and surgeons of Glasgow occupying the chairs, and it was here that Dr. David Livingstone, the explorer and missionary, obtained his medical training.

In more recent times the teaching staff was still further extended, a lectureship on Ophthalmic Medicine and Surgery being endowed in 1869 and a Lecturer on Public Health appointed in 1878, while in the following year a lectureship of Aural Surgery was instituted as well as those of Dental Anatomy, Dental Surgery, and Dental Mechanics. The School is thus well furnished with teachers, and theoretical and practical work is conducted, according to modern methods, in winter and summer sessions, the fee for each course of lectures being £2, 2s. for a first session and £1, 1s. for any further attendance, while in Anatomy, including Practical Anatomy, it is £4, 4s. for the first and second sessions and £1, 1s. afterwards. The classes are recognised as qualifying for diplomas by the Royal Colleges of Physicians of London and Edinburgh, by the Royal Colleges of Surgeons of England, Edinburgh, and Ireland, by the King's and Queen's College of Physicians of Ireland, by the Faculty of Physicians and Surgeons of Glasgow, by the Apothecaries' Hall of London, and by the Army, Navy, and East India Boards, and also, subject to their regulations, for the degrees of the Universities of London, Glasgow, Edinburgh, Durham, and Ireland.

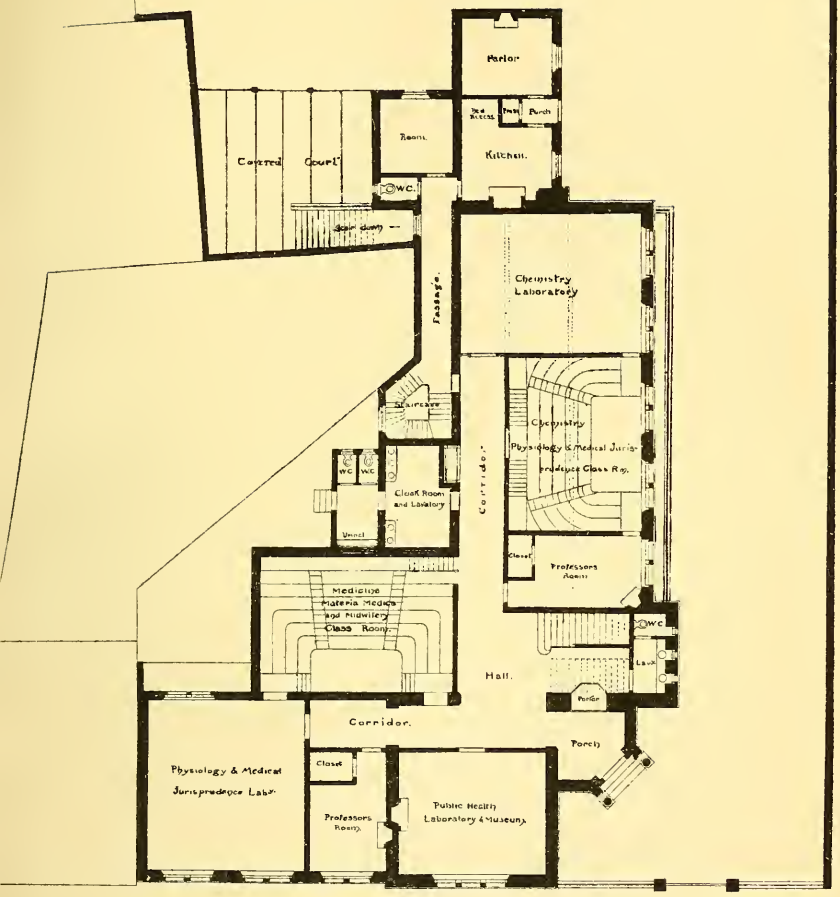
Among the foundations attached to Anderson's College, besides a number of bursaries and prizes, there are several which deserve special mention. In 1861, John Freeland, residing at Nice, mortified the sum of £7,500 to secure the delivery, annually or periodically, of separate courses of popular lectures on the three following subjects:—1. Chemistry; 2. Mechanical and Experimental Physics; and 3. Anatomy and Physiology; and ten years later he made a further gift of £5,000. In 1866, William Ewing, of Glasgow, settled in trust the sum of £3,000 for the purpose of securing the delivery of popular lectures on music and kindred

subjects, and he subsequently made a gift of the Model Schools adjoining the University buildings, bequeathing also his musical library and over £7,000. In the year 1870, James Young, LL.D., F.R.S., of Kelly and Duris, a former student of this university, whose name is so closely connected with the paraffin industry, settled in trust the sum of £10,500 for the purpose of establishing a Chair of Technical Chemistry, and in 1876 the sum of £7,000 was subscribed by various gentlemen for the endowment of a Chair of Applied Mechanics.

In 1877 the name of the institution was altered from "Anderson's University" to "Anderson's College," and the Trustees were made a body corporate with powers and duties remodelled and defined by "Anderson's College (Glasgow) Act, 1877" (40 Vic., c. xii). In accordance with the scheme for the establishment of a Technical College for Glasgow and the West of Scotland, drawn up by commissioners appointed under the provisions of the Educational Endowments (Scotland) Act, 1882, the Medical School was, in 1886, separated from Anderson's College, and £5,000 paid to the body of trustees, who became the governing body of that Faculty, to be expended on the purchase of ground or the erection of buildings for the accommodation of the School. An association, called the Anderson's College Medical School, was incorporated in 1887 to continue the School, and a site has been acquired for the new buildings on the Dumbarton Road, close to the gate of the Western Infirmary, where, according to the plans prepared by Mr. James Sellars, the edifice will contain four class rooms, two laboratories, a large dissecting room, four museums, a library and reading room, a students' room, and the necessary private rooms and conveniences for the professors and students.

C. F. P.

ANDERSONS COLLEGE
MEDICAL SCHOOL



DUMBARTON ROAD

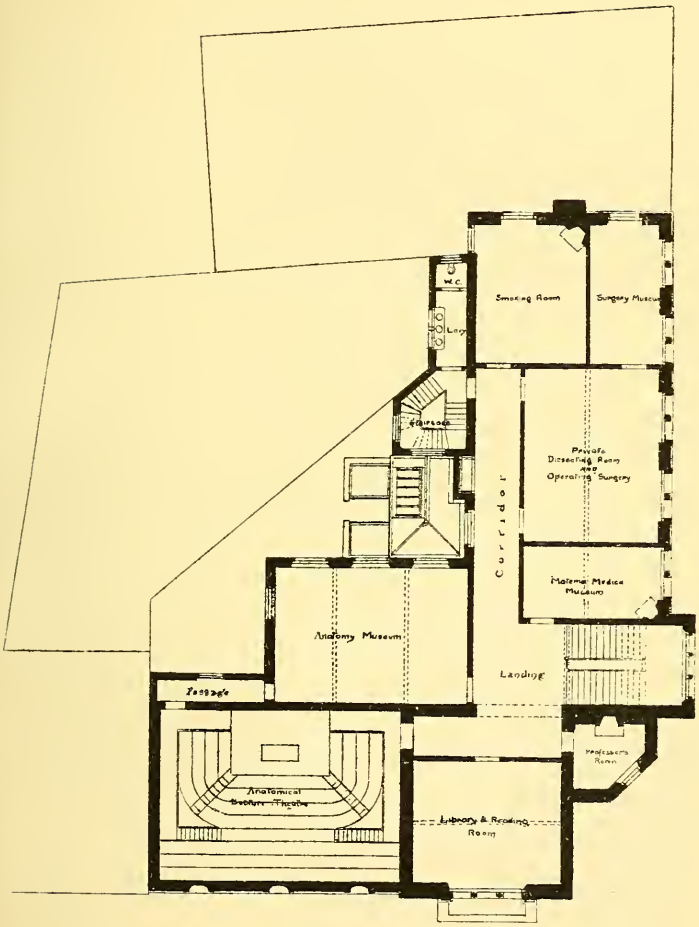
PLAN OF GROUND FLOOR

John Honeyman & Keppie
Architects
140 Bath Street
Glasgow.

Scale 10 5 0 10 20 30 40 50 60 70 Feet

W. M. MOLLISON & Co. LITH GLASGOW

ANDERSONS COLLEGE
MEDICAL SCHOOL



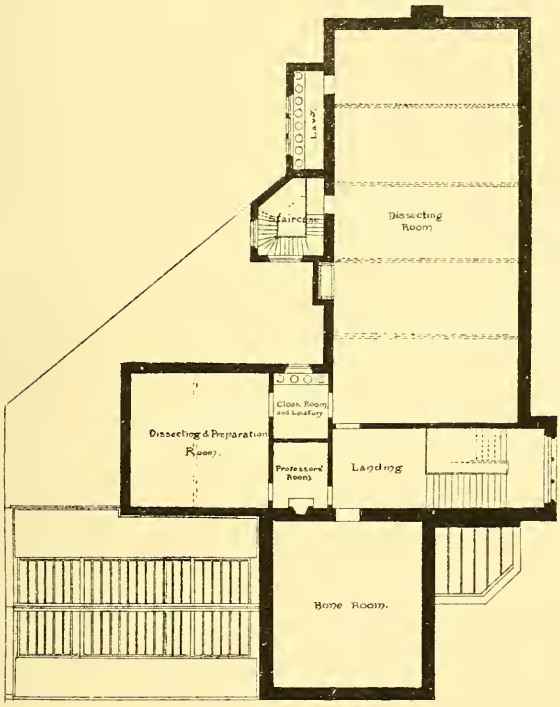
PLAN OF FIRST FLOOR

John Honeyman & Keppie
Architects
140 Bath Street
Glasgow.

Scale

W. M. MOLLISON & CO. LITH. GLASGOW.

ANDERSONS COLLEGE
MEDICAL SCHOOL



PLAN OF SECOND FLOOR.

John Honeyman & Keppie
Architects
140 Bath Street
Glasgow.

W. M. MOLLISON & Co. LITH GLASGOW

WESTERN MEDICAL SCHOOL.

THIS School, situated in close proximity to the Glasgow University, is maintained entirely by an Association of Lecturers, whose lectures are recognised by the University of Glasgow, and other examining boards. It owes its origin to Dr. D. N. Knox, who, in 1878, gave a course of lectures on Surgery. Two years later, courses of lectures on Medicine and Midwifery were started. Thereafter an attempt was made for some years to give lectures on all the subjects of the medical curriculum, with the view of forming a complete extra-mural school. But it was found that the students who attended the classes were nearly all University men, who only came to the School for special courses, and, in consequence, several of the classes had to be given up. Lectures are still given, however, on Anatomy, Surgery, Medicine, Midwifery, Diseases of the Eye, and of the Ear and Throat, during the Winter Session; and on Practical Anatomy, Operative Surgery, and Gynæcology, in Summer. These classes are steadily increasing in favour with the students of the University, of whom about 150 have been in attendance during the past winter and present summer sessions.

D. N. K.

ROYAL INFIRMARY SCHOOL OF MEDICINE.

THE circumstances which led to the formation of the Royal Infirmary School of Medicine may be briefly stated as follows:—

From the time that the Royal Infirmary was opened in the year 1794 till 1874, it was the only hospital available for instruction in Clinical Medicine and Surgery in Glasgow, and was, during that period, in close proximity to the

Glasgow University, then situated in High Street; and to Anderson's College, situated in George Street. In 1870 the University was transferred to Gilmorehill, at the west end of Glasgow, and in 1874 the Western Infirmary was opened, the result being that the Royal Infirmary ceased to be available for clinical purposes, except for students attending Anderson's College. A double loss was thus sustained—first, a loss of students who added to the prestige of the hospital, and who acted, in conjunction with the staff of the hospital, as Resident Assistants, and as Dressers in the Surgical Wards; and, second, a loss of most valuable clinical material, in so far as the teaching of medical students is concerned.

At this critical period, the managers, on the suggestion of the late Dr. John Gibson Fleming, one of their number, and formerly President of the Faculty of Physicians and Surgeons of Glasgow, applied for and obtained, in 1875, a supplementary Charter, which, among other things, included "Powers to afford facilities and accommodation for the teaching of Medicine and Surgery, and the Collateral Sciences, usually comprehended in a medical education."

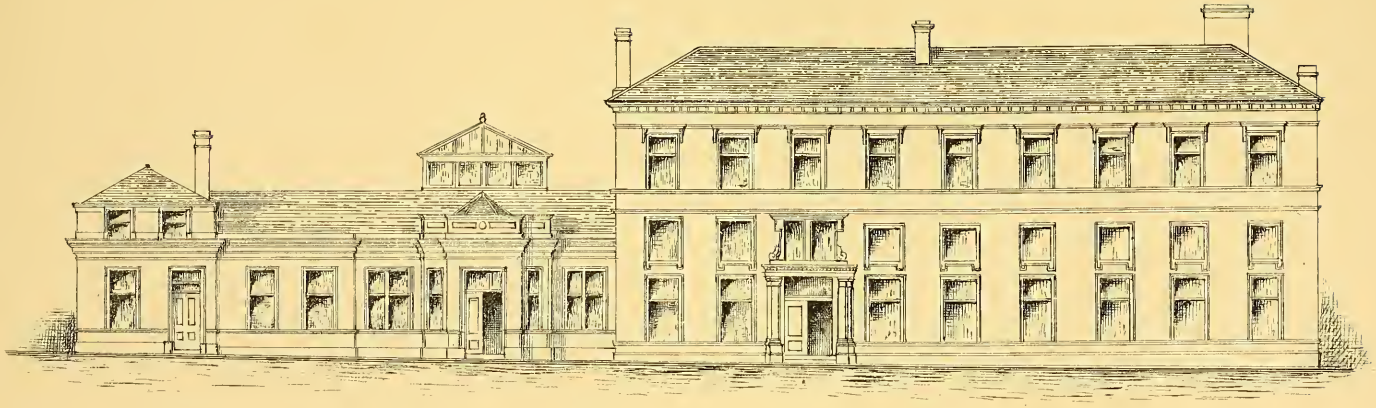
At their first meeting in 1876, the managers appointed a Committee of their number to consider and report what steps they would recommend should be taken in virtue of the powers thus acquired; and, after full and careful consideration, the Committee reported, *inter alia*, as follows:—

1. That to utilise, to the full extent, the unsurpassed advantages, which the Royal Infirmary affords for instruction in the Medical Sciences, would conduce to the best interests of the Infirmary as a great Public Charity.

2. That the fullest realisation of these advantages can be secured only by the institution of a School of Medicine in connection with the Royal Infirmary.

GLASGOW ROYAL INFIRMARY.

MEDICAL SCHOOL & DISPENSARY.



3. That, though the advantages which the Infirmary affords are principally connected with the practical branches of medicine, the institution of classes for instruction on these subjects, apart from what are known as the fundamental branches of Medical Science, would not have a fair claim for complete success.

4. That the School should, therefore, provide instruction in all the subjects necessary for qualifying students of medicine for admission to the examinations for a Licence to practise, as in the case of the English Metropolitan, and some of the Provincial Hospitals.

These clauses of the report, especially the third and fourth, give the *raison d'être* of the establishment of the school.

The report was adopted by the managers; lecturers were appointed; class-rooms were provided, and fitted up; and, on 1st November, 1876, the school was formally opened.

The number of students who joined the School at its opening was much greater than the Managers expected, "showing, in their opinion, that this addition to the educational functions of the Infirmary was a highly judicious step, and calculated to conduce to the best interests of the Institution."

Shortly after the institution of the School, the temporary class rooms were found to be inconvenient and insufficient in size; and, in consequence, Mr. William M'Ewen, of Glasgow, Chairman of the House Committee, in 1881, resolved to carry out the original idea of Dr. Fleming of having a separate building erected for the accommodation of the Medical School worthy of the Royal Infirmary with which it is associated, and of the memory of Dr. Fleming (who had died in the interval) with whom he had been long associated in the management.

In furtherance of this scheme, Mr. M'Ewen collected funds

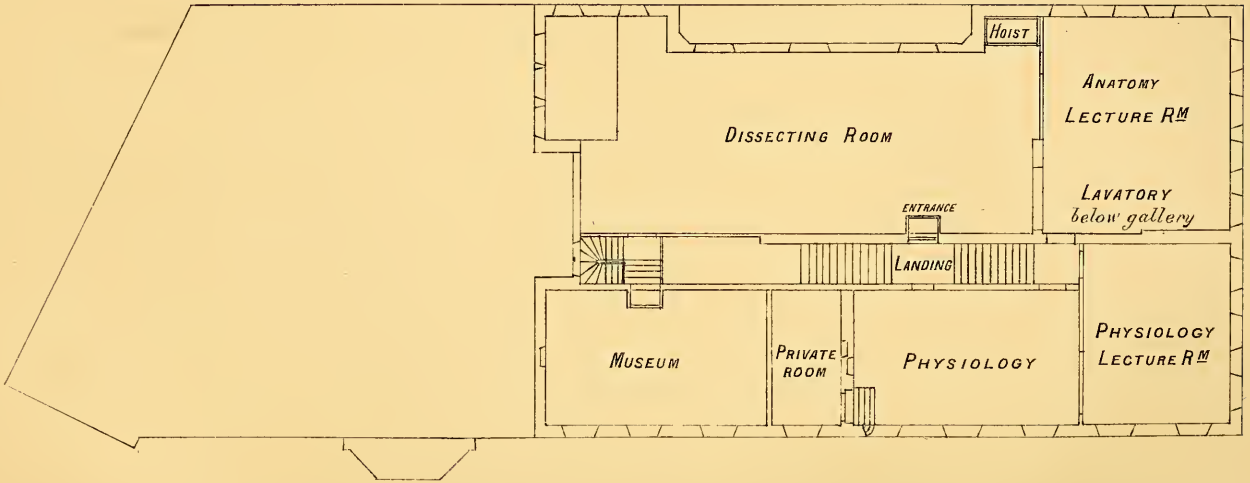
to the amount of £6,000, had plans for the new school drawn out and submitted to the managers, and, the plans being approved of, the building was commenced in 1881, and completed in 1882, the classes in the new building being opened at the winter session of 1882-83.

The new building, designed and arranged by Mr. James Thomson (of Baird & Thomson, architects), in conjunction with the writer of this notice, who jointly and separately visited other schools and universities to glean information, is situated in the grounds in close proximity to the Royal Infirmary. It is in the Italian style of architecture, and was formally opened by Lord Provost Ure, on the 1st November, 1882. It has an Anatomical department, consisting of a Lecture Room, an Osteology Room, and a Museum. The Dissecting Room, constructed on the most improved plans, as regards heating, ventilation, and light, measures 67 feet in length by 25 feet in breadth, and affords ample accommodation for a large number of students. The Chemical and Physiological Laboratories are large and fully equipped, the latter being provided with valuable apparatus, part of which was presented by Dr. Henry Muirhead, then one of the Managers. The Lecture Rooms, for all the other classes, are equally well fitted up. Private rooms are provided for the Lecturers; and, for the use of students, there is a large room with lavatory attached. The students have also the use of the Osteology Room, for purposes of study, and of a Reading Room supplied with newspapers and the leading Medical Journals, the general aim being to supply the students with all facilities for obtaining a superior medical education.

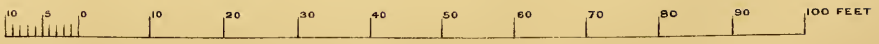
The following classes are taught—viz., Chemistry, Anatomy, Physiology, Materia Medica, Surgery, Practice of Medicine, Midwifery and Diseases of Women, Medical Jurisprudence,

GLASGOW ROYAL INFIRMARY,

MEDICAL SCHOOL & DISPENSARY.

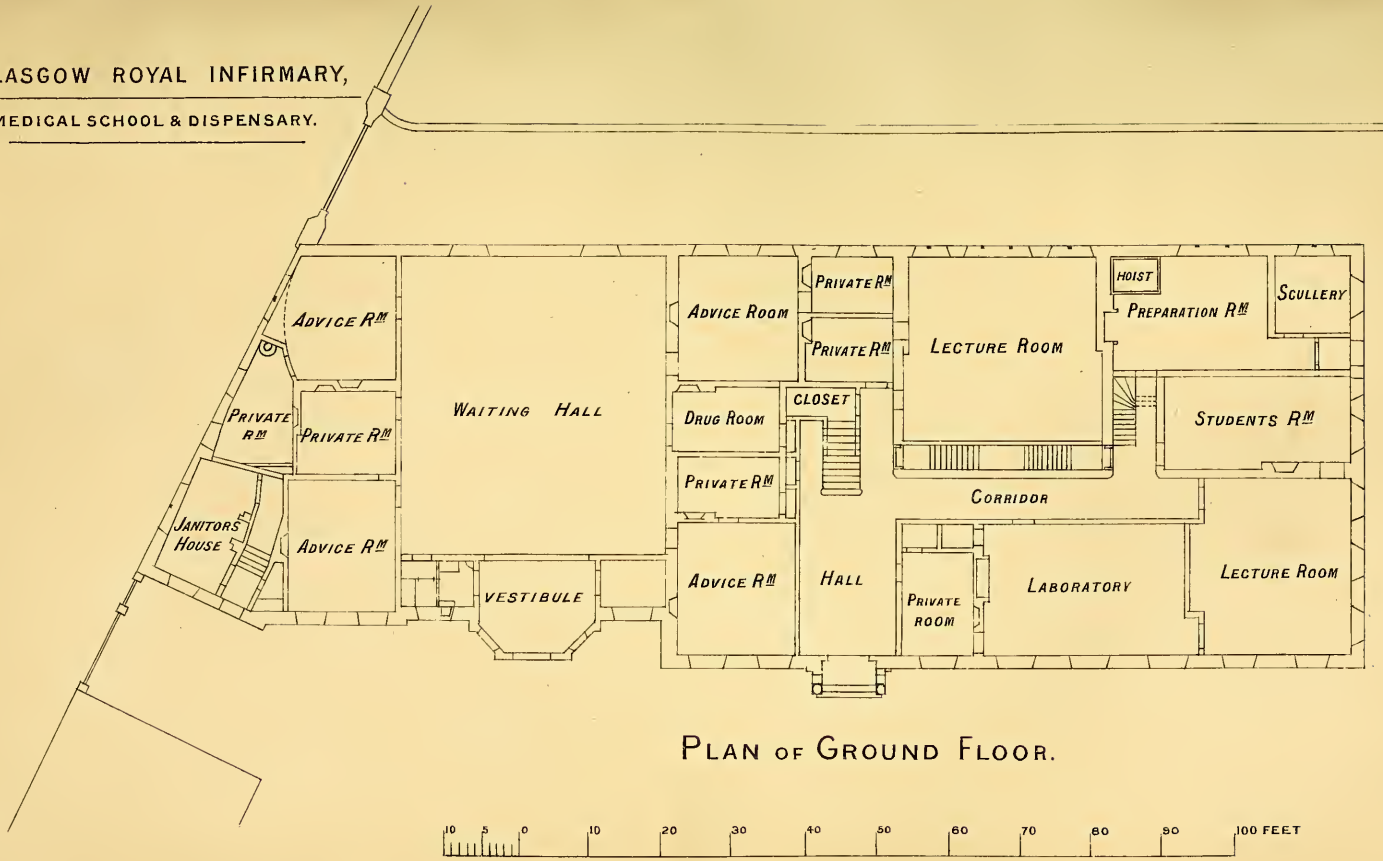


PLAN OF UPPER FLOOR



GLASGOW ROYAL INFIRMARY,

MEDICAL SCHOOL & DISPENSARY.



PLAN OF GROUND FLOOR.

and Pathology. The Medical and Surgical Dispensary is in the Medical School building, and is attended by large numbers of out-door patients. In addition to the usual clinical teaching in the Infirmary, special lectures are delivered on Diseases of the Throat.

The cost of a complete medical education, including classes such as Practical Physiology, Operative Surgery, and others, which are now practically necessary, and two courses of Medicine and Surgery, is about £60. The cost for what is set down on the curriculum only would be not more than £50.

Attendance on the Lectures is recognised by all the Bodies qualified to grant diplomas; and also by the University of London, and the Royal University of Ireland for the degrees of M.B., C.M. The lectures, to a limited extent, are recognised by the Scotch and English Universities. They qualify also for the Army, Navy, and Indian Medical Service.

Since the opening of the Medical School, in 1876, important changes have been made in regard to the diplomas granted by the Corporations, there being now but one Scotch diploma granted in accordance with the conjoint scheme, called the triple qualification, those obtaining it being Licentiates of the Royal College of Surgeons, of the Royal College of Physicians, Edinburgh; and of the Faculty of Physicians and Surgeons, Glasgow.

M. T.

General Hospitals.

—o—

GLASGOW ROYAL INFIRMARY.

This is the largest and oldest of the medical charitable institutions of Glasgow. It was opened on the 8th December, 1794, under a charter granted by His Majesty, King George III, on the 21st December, 1791, to James M'Dowall, Esq., Lord Provost of the City of Glasgow, and to other contributors to the Glasgow Infirmary, who had represented to His Majesty "that an Infirmary, for the relief of persons labouring under poverty and disease, has long been wanted in the city of Glasgow and in the adjoining counties of Scotland, and is become more necessary at present than at any former period, on account of the prosperous state of manufactures in Glasgow and its neighbourhood, and the increased population of those classes of manufacturers and labourers of every kind, who are most likely to require charitable assistance." Such are some of the cogent reasons referred to in the charter for the establishment of an Infirmary in Glasgow, and we can only wonder why one had not been erected long before, as we know that the similar institution in Edinburgh was at this time half a century old. It can only be accounted for on

GLASGOW ROYAL

INFIRMARY,

the supposition that the sick poor amongst the labouring classes had hitherto been well cared for; but now that the trade and population of the city were increasing, something more was required, and that of a kind which would foster the independence of the working classes. For this purpose George Jardine, Professor of Logic in the College, who is credited with having originated the idea, gathered around him an eminent and devoted band of fellow-workers, and very soon the idea became an accomplished fact. In addition to the charter, a site was also granted by the Crown—one of the best that at that time could have been fixed on. The Archbishop's Castle or Palace, as it is variously termed (a *fac-simile* of which may be seen in the grounds of the Exhibition now being held in Glasgow), situated near to the Cathedral, was fast becoming a heap of ruins, and many of the citizens were taking the stones of it to build their houses or inns with.* It was an historical structure, having been besieged and taken by the English at various times. It was the place in which Bishop Cameron had held high court with almost regal magnificence; it had been attacked, defended, and taken by the different parties during the troubled reign of Queen Mary Stuart; and, last of all, it was occupied by Cromwell during the time he was in Glasgow. After the Revolution and Settlement of 1688, when bishops and archbishops ceased from troubling the national sentiment of Scotland, the castle remained in the gift of the Crown; and it was gratefully accepted by those who were interested in the establishment of the beneficent institution which now occupies its place. So pleased were the Managers with the site that it is worth while to quote from the Annual Report of 1797 what they say about it:—"And

* The Old Saracen's Head Inn in Gallowgate Street was said to have been built with these stones.

now, from sufficient experience, the Managers have the satisfaction of reporting that in point of situation, good air, abundance of good water, and convenient accommodation of the patients, the Royal Infirmary of Glasgow is not excelled by any other establishment of the kind in Britain of which they have had information."

On its foundation, the Infirmary consisted of the front building, which extends east and west. This contained eight wards, capable of holding 17 patients each, including those on the side rooms, making 136 in all. In the entrance hall, or vestibule, the physicians and surgeons gave advice to applicants, and, with the sanction of a Committee, admitted those into the wards who came with subscribers' lines, if after examination they were found to be fit and proper patients. Branching off the central passage are the wards; those on the right being for males, and those on the left for females. On the floor above, there was a large room for the meetings of the Directors and the consultations of the Medical Officers; and above this, on the third floor, was the sleeping room of the House Surgeon, and the Surgery, in which were placed all the instruments, fracture apparatus, &c. Surmounting the whole, and situated in the centre of the building, is the Operation Room under the large dome, which is supported on 12 pillars. This theatre was seated for 200 students, and the dome rises 35 feet above the floor. The architect was Mr. James Adam. Such is the description of the building given by Dr. M. S. Buchanan, in his history of the Glasgow Royal Infirmary, published in 1832. On the whole, it agrees with the state of things as they at present exist; the only difference being, that the seats, which will be well remembered by the older students of the Hospital, have all been removed, and the Operation Room converted into a Chapel, for the

use of the patients. Owing to these alterations, the beautiful proportions of the dome are seen to advantage. The Surgery, also, has been removed to the basement of the building. It may be mentioned in passing, that S. Kemble, brother of the celebrated actor, John Kemble, and of Mrs. Siddons, who was at the time lessee or manager of the Glasgow Theatre, on the evening of the day on which the foundation stone was laid, gave a benefit on behalf of the Infirmary.

In 1815, owing to epidemics of fever, and the increase of the working-class population, the wards got overcrowded to an alarming extent—178 patients being frequently accommodated in a house which had only provision for 136. The Managers, therefore, resolved to increase the accommodation, and they did so by projecting a wing northward from the centre of the front Building. This wing, which gave an increase of 72 beds, was opened in 1816, and it was soon fully occupied. For similar reasons, and after having vainly provided temporary accommodation for epidemics of fever, which were supposed would only be of like temporary duration, the Managers, in 1825, proceeded to erect a special fever house to the north-east of the front house. It was partially ready in 1829 and finally completed in 1832, and contained 220 beds. Glasgow, from its being one of the ports to which immigrants came from Ireland, was, at this time, particularly subject to epidemics of fever, and the Infirmary authorities, to whom all looked for action at such times, again erected in 1847 sheds for the reception of fever patients. Many yet alive will remember these sheds. When not in use for the reception of fever, surgical patients were put into them; and I have heard the surgeons speak with pleasure of the gratifying results they obtained in these rough wards. They attributed this to their better ventila-

tion, caused by the air penetrating through the seams of the wood of which the building was constructed; and the older the building became, the more open became the seams. These sheds gave way in 1857 to the new Surgical Hospital, which was erected to meet the ever-growing wants of the ever-growing population of the city and surrounding districts. Previous to this, the medical and surgical patients were treated in the same building, but it was then resolved to separate them. A new hospital, devoted to surgical patients only, was therefore erected to the north of the fever house, and opened in 1861. It was built under the superintendence of Dr. James M'Ghie, then superintendent of the Infirmary, who spent a great deal of time and labour on it, in order that he might make a hospital complete with all the latest improvements known at that time. It contained 144 beds, making the total number in the Hospital 572; but this number was increased to 680 on account of the great number of patients who applied for admission, and for whom accommodation had to be provided. This overcrowded condition soon made itself felt, as many of the fever clerks or residents were attacked with typhus, and several died; and this led to an inquiry in 1866, with the result that the number of beds was reduced to 547, and at present the number is 542. Of these, 214 are for medical and 318 are for surgical patients, the demand for surgical accommodation being by far the greater. All infectious cases continued to be received, but in 1871 small-pox was excluded, on account of its affecting some of the other patients, and also because accommodation was provided for it by the authorities of the city. In 1876 all infectious diseases were excluded, with the exception of typhoid fever, which was treated in the ordinary wards, and the accommodation thus set free was used for the reception of surgical patients, and

in 1886 typhoid fever was also excluded as being dangerous to the other patients.

Management.—Under the Charter, the management was confided to a body of twenty-five directors. Of these, seven were perpetual by reason of their office; eight were elected annually from public bodies; and ten from the Court of Qualified Contributors. The seven life members are the Lord Provost of the City of Glasgow, the Member of Parliament, the Dean of Guild, the Deacon Governor of the Trades' House, the Professor of Medicine, and the Professor of Anatomy of the College of Glasgow, and the President of the Faculty of Physicians and Surgeons of Glasgow. As there are now seven Members of Parliament for Glasgow, the number of life governors has, in consequence, been increased to thirteen. Those elected by public bodies are—one from the Town Council of Glasgow, one from the Merchants' House, one from the Trades' House, one by the Established Ministers of Glasgow, one from the Faculty of the College of Glasgow, and three from the Faculty of Physicians and Surgeons. The General Court of Contributors consists of those who have contributed £10 or more, or subscribed annually £2, 2s. or more; and of the Preses or Heads of such societies or bodies of men as shall have respectively contributed £50 or more, or who shall pay an annual subscription of £5, 5s., or more, after having been subscribers for one year. This body elects two of its number annually; and two of them retire annually, and are ineligible for one year. Annual subscribers are entitled to send one patient for every guinea they subscribe; and a payment of £10 constitutes a life subscription, entitling the donor to send one patient annually. The management is on a popular basis; and from the number of medical men who are directors, the profession is at all times influentially represented. As many of them

have either acted as Resident Assistants, or been on the Visiting Staff, their presence on the Management is of the greatest use in the consideration of medical subjects which may come before the Board.

In the first annual report for the year ending 31st December, 1795, the number of patients admitted is given as 145 medical and 131 surgical—in all 276. It is interesting to note the names of the diseases as given in the report. Some of the patients suffered from "herpetick eruption;" some from "consumption and pulmonick affection:" two had "looseness;" others had "pox and gonorrhœa;" "sibbens:" "bite of a mad dog;" and, last of all, four are put down as "anomalies." Amongst the operations there were two cases of trepan, eight amputations, one aneurism, one double "hair-lip," one cancerous eye, one imperforated nostril. Medical advice was given during the first year in the waiting-room to 3,000 out-patients. The collections and contributions for the same period amounted to £3,005; but in the following year this was reduced to £2,244, including a sum of £80, 19s. received from students attending the Infirmary. The population of the city at that time was 77,385. In the ninety-third annual report, which is for the year ending 31st December, 1887, the number of patients admitted for that year was 1,901 medical and 2,889 surgical—in all 4,790; whilst the number who received advice and treatment as out-patients was 36,988. The population, as given in the census of 1881, was 511,415. The annual contributions and collections amounted to £13,705, and the students' fees to £594; whilst the total expenditure was £23,225. The fees from the students were at one time considerably greater in amount: but since the opening of the Western Infirmary they have decreased to nearly a third, notwithstanding a large increase in the Hospital fee, as the students migrated west in the

company of their professors, many of whom at the time were members of the Royal Infirmary staff. When the Hospital was first opened, the staff consisted of two physicians and four surgeons; now it consists of four physicians, six surgeons, six assistant physicians and six assistant surgeons, a pathologist or curator of the museum, a vaccinator, an aurist, an oculist, a dentist, a surgeon for diseases of the throat, one for diseases of women, a physician for diseases of the skin, and an electrician—in all 29. There are also ten resident qualified assistants elected every six months, who perform all the duties of house-physicians and house-surgeons.

At first the medical attendants gave their services gratuitously; but in 1807 a salary of £30 per annum was given to each physician, and £10 per annum to each surgeon, with the proviso that no one should be entitled to salary until he had attended two years gratis in the Infirmary. These salaries were increased with the increase in the number of students; whilst, in addition, half of the students' fees were divided amongst the clinical teachers; but in 1875, owing to these having diminished on account of the withdrawal of the University students, the salaries of the visiting staff were increased to 100 guineas annually, and two-thirds of the students' fees were divided in addition amongst those of them who gave clinical instruction and lectures.

The first apothecary, as well as the first house-surgeon, in the Royal Infirmary was John Burns, son of the Rev. Dr. Burns of the Barony Church, and brother of the founders of the celebrated Cunard Company, who afterwards became one of the Surgeons of the Hospital, an extra-mural Lecturer on Anatomy, then on Midwifery, and the first Regius Professor of Surgery in the University of Glasgow. Another apothecary was Dr. Robert M'Gregor, who detected sugar in the serum of the blood, and in the half-digested con-

tents of the stomach of diabetic patients. Dr. Robert Perry, whilst acting as Fever Physician, was the first who distinguished typhoid from typhus fever—a distinction made more widely known by the late Dr. A. P. Stewart, of London, but who at the time acted as physician's clerk to Dr. Perry. Dr. Andrew Buchanan, one of the visiting surgeons, and Professor of Physiology in the University, was the first to invent and use the rectangular staff in the operation for lithotomy; and it was in the wards of the Glasgow Royal Infirmary that Sir Joseph Lister first began his antiseptic method of treating wounds with carbolic acid, which has since become so general.

GLASGOW MEDICAL JUL 23 1889 LIBRARY

The statistics of the Hospital have been well kept. They have been largely referred to by various authors, especially by Dr. Murchison in his treatise on Fevers, and by Sir James Y. Simpson in his famous treatise on Hospitalism. The results after amputations and of compound fractures have been very favourable; and there is perhaps no better field for the study of these than the Royal Infirmary, as more accidents are received into it than into any other hospital in the kingdom, with the exception, perhaps, of the London Hospital. During the year 1887, 2,462 accidents were brought to the Royal Infirmary, and of these 1,081 were received into the wards, most of the injuries being of a very serious character. It is situated in the centre of a large manufacturing and mining district, surrounded by railways, from which many of the worst cases of accident come. Accidents from machinery and other causes are also numerous; and, in addition, there is always a large number of patients admitted for diseased bones and joints, for which amputation or excision has to be performed. No better practical school for the student or for the general practitioner can be found.

Though the Hospital has only six years to complete a

century of existence since it was opened, and the older part of it is not to be compared with more modern structures, it has been maintained by the managers in a most efficient state, and they have never failed to provide it with the most modern improvements, both in the interests of the patients as well as for the advancement of medicine. Within the last few years, wards have been set apart for the treatment of special diseases, a separate medical staff appointed for them, and the ordinary staff of the dispensary largely increased. A commodious and well appointed pathological laboratory has been fitted up, under the charge of the pathologist, which is open to all students and medical men, without fee, for the purpose of pursuing investigation. There is also under the charge of the pathologist an excellent museum, originally instituted by Professor Allen Thomson, and Dr., now Sir Wm., Aitken, of Netley. It contains many rare and valuable morbid specimens. A central room, provided with the latest electrical apparatus, is one of the features in the institution worthy of notice. From this room wires radiate to all the different wards and operating theatres, and galvanism can be applied to the patients without the necessity of their leaving their beds. In the same way the electric cautery can be used for operations in the theatres, and also Dr. Apostoli's method of treatment of uterine fibroids can be accomplished without carrying about any cumbrous or delicate apparatus which might be spoiled in the transit. The whole is under the direction of the medical electrician, who is also one of the assistant surgeons, and who sees that all the instruments are kept in proper condition and ready for immediate use. A cutler also has charge of the surgical instruments; and the appointment of this official has been of the greatest service. He is now considered indispensable.

The ventilation of the wards has also been improved, and they are all heated by means of hot water. The store and kitchen have been remodelled, and the laundry, which is commodious and well arranged, is provided with machinery for washing, gas irons for ironing, a drying stove, and a disinfecting chamber. All the patients' clothes are disinfected, then washed, when requiring it, in a separate place, and stored after admission. Whilst in the Infirmary the patients are supplied with house clothing, which they wear as long as they remain there. Upwards of 10,000 articles of clothing are washed weekly, and all this is done with a staff of thirteen women and a head laundress. The uniforms and other clothing of the nurses and servants are also washed, as well as the underclothing of the resident medical staff; and as there is a daily population of nearly 700 persons in the Hospital, some idea may be gathered of the amount of work done in the laundry. The staff of nurses numbers 100, and they are provided with uniforms; and the general servants, who number 69, also have uniforms given them.

With regard to the nursing, it will be desirable to say a few words. Each ward is provided with three nurses—a senior or staff nurse, a probationer to assist her, and a night nurse. These have never more than twenty patients under their charge; but when the cases are unusually heavy, an extra nurse is added as required. There is also one superintendent of day and two superintendents of night nurses, and a matron. Until lately the majority of the nurses slept in rooms off the wards; but this has been done away with, and they are now accommodated in a house built expressly for them and opened this year. They have also been provided with a tennis court, in which they can exercise themselves when off duty. In the Home they have a large sitting and recreation room, suitably furnished, in which there

is a library and piano. The nurses are carefully selected; and as their pay begins at £12 and increases to £30 a year, with uniform, board, washing, and excellent accommodation, there is always a number of good applicants waiting until they can be admitted. The nurses have no menial work to do, and altogether the position of a nurse in the Royal Infirmary is one to be sought after. The erection of this Home is the last and not the least of the many improvements which have been effected by the Managers; others are in contemplation, requiring only time and money to carry them out.

It is gratifying to state that, without efficiency being impaired, the cost per bed, including the whole expenditure and without deducting anything for out-patients, was only £47, 3s. 5d., and the average cost of each patient was £4, 16s. 11d. for the year ending 31st December, 1887.

Medical Staff.—As previously mentioned, the ordinary staff consists of four physicians and six surgeons, who visit the Infirmary daily at 9 A.M., and of six assistant physicians and six assistant surgeons, who attend daily (Sunday excepted) the out-door department at 2 P.M. Although elected annually, in accordance with the Charter, the visiting staff are in reality appointed for a period of ten years, after which they cannot be re-elected until a year of ineligibility has been passed. All have the option of giving clinical instruction and lectures to the students, who, in their turn, have the privilege of selecting the teachers whose clinic they wish to attend; but no student is allowed to attend the clinical class of a physician and of a surgeon during the same session. This is sometimes complained of as a grievance, but it is the best arrangement for the student, as it ties him down to one thing at a time, and prevents him running between the medical and surgical wards as he formerly did, and as sometimes happens yet in

those institutions where the system has not been adopted. The assistant physicians and surgeons hold office for eight years, subject also to annual re-election, and at the end of that period they are ineligible for office for one year. As is natural, the visiting staff is usually recruited from amongst them when a vacancy occurs; but the Managers reserve to themselves the right of electing the best candidate, even though he should not be on the staff. The perpetual fee paid by the student is £21. This includes hospital practice, clinical instruction, and lectures, attendance on the out-door department, &c. It can be paid in instalments of £10, 10s. for one year, £6, 6s. for six months, or £4, 4s. for three months.

Resident Medical and Surgical Appointments.—There are four medical and six surgical resident assistants, the appointments being open to all qualified practitioners, and no premium being required. Each physician and each surgeon has an assistant, who is appointed for six months, with the option of re-election for a similar period. As each assistant has about 50 patients under his charge, he acquires in a short time a large, varied, and practical knowledge of his profession.

Financial Department.—The collection of the revenue for the maintenance of the Infirmary is done by a paid cashier, under the Honorary Treasurer. The mode of collection is organised on a systematic basis. Calls are made on every one who is deemed able to subscribe, and subscription sheets, or forms, are sent to employers of labour, or to committees and societies of workmen, who make it a point to collect and remit what they have gathered to the cashier before the end of the month of December, the close of the financial year. The ordinary revenue is therefore divided as follows:—First, annual subscriptions from the general public, who gave last year £7,106; second, from employées in public

works, warehouses, &c.—these subscribed £5,134; third, church collections, which last year yielded £975; fourth, donations under £50; fifth, annual subscriptions from captains and crews of steamers, &c., £87; sixth, interest, ground annuals, &c., £4,456: seventh, proportion of students' hospital fees—£200; and lastly, payments made by parochial boards and admission fees paid for patients, £308—making a total of £18,670. Another source of revenue is from legacies and donations above £50. This extraordinary source, as it is called, is variable. Last year the revenue from it amounted to upwards of £21,000, but this was very exceptional. The amount subscribed by the workmen is very creditable, and it is expected that it will be increased by a system they themselves are bringing into operation, with gratifying results. As it is, I have pleasure in recording that the workmen of Glasgow are held up for approbation and imitation for the generous way in which they subscribe to this as well as to other local charities. Still the result shows the need of organisation. In 1847, the sum they collected was £1,164; in 1887, the sum they gave to the Royal Infirmary alone was £5,134. They also gave liberal sums to the other infirmaries and hospitals. This liberality is worthy of being brought under the notice of the members of the British Medical Association, as in the present outcry about how our hospitals are to be maintained, which has taken hold of the public mind in England, it may lead to inquiry as to the methods by which all this is effected, and be the happy means of increasing the subscriptions of the working men in other places to their various hospitals and institutions.

M. T.

GLASGOW WESTERN INFIRMARY.

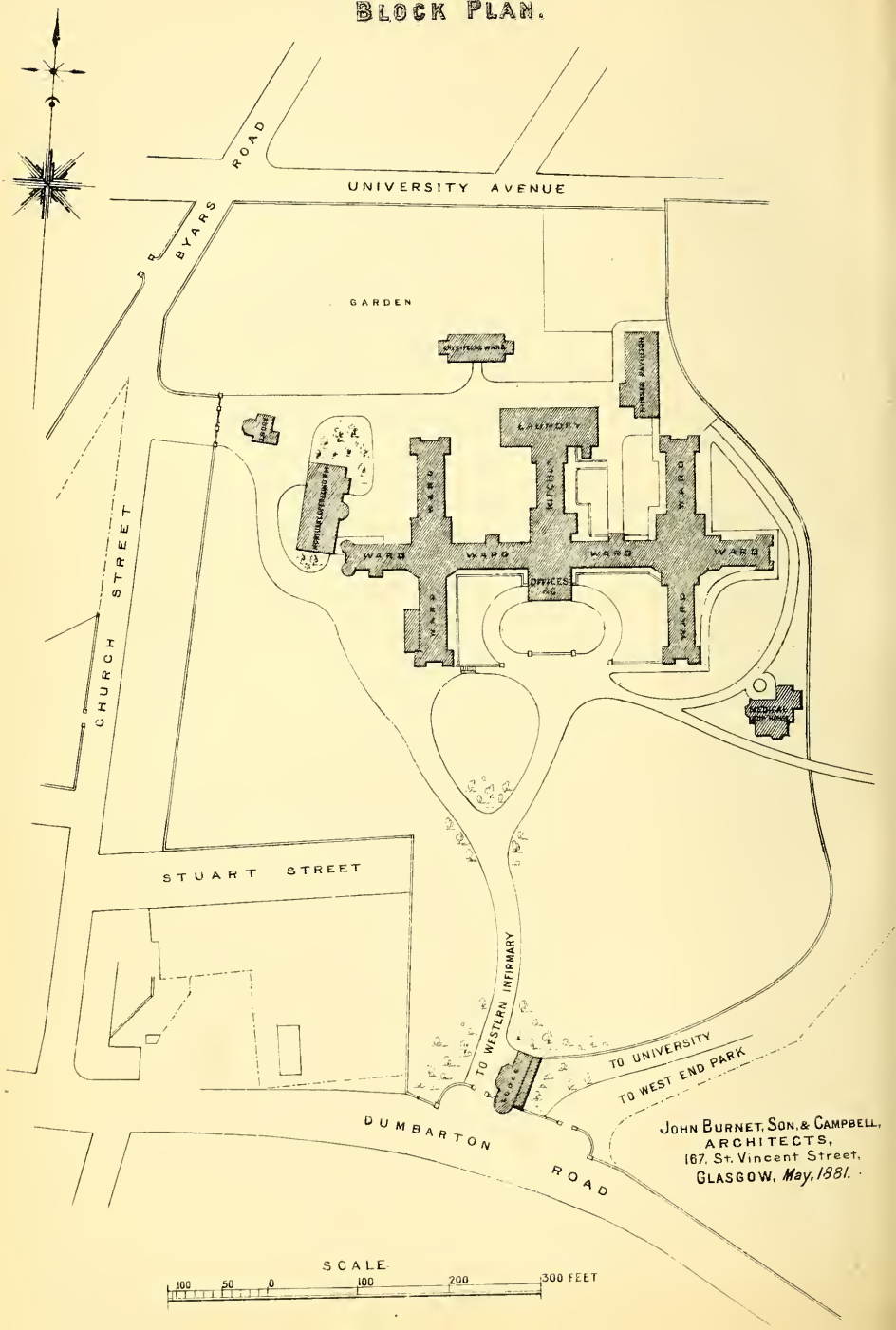
History of its Building.—The idea of a Western Infirmary for Glasgow, though realised only in 1874, may be traced back as far as 1846, when, owing to railway extensions that involved the removal of the old University buildings in High Street, it was proposed to erect the new University buildings farther west at Woodlands, near the site of the present Park Terrace. Facilities for clinical instruction were required, and ground was therefore obtained in the immediate vicinity as a site for an infirmary. The railway crisis came in 1849, however, and the scheme was abandoned.

The removal of the University was again proposed in 1864, and the scheme which the public were asked to support included an infirmary in which medical students were to obtain their clinical instruction. The rapid extension of Glasgow westwards, pushing with it along the Clyde its shipyards and manufactories, afforded another and an urgent reason for providing hospital accommodation in the western district. The property of Clayslaps was accordingly purchased as a site for the infirmary, but this was afterwards given to the Corporation of Glasgow in exchange for a portion of the lands of Donaldshill, to which was subsequently added ground to the north and west, which has secured for the infirmary an open space of considerable extent on all sides. The total cost of the site was £23,136, 11s.

During the years 1868-69, plans were prepared and accepted for an infirmary to accommodate about 350 patients. It was considered expedient, however, to proceed in the meantime with only part of the building originally planned, and modified working plans were made which gave accommodation for about 190 patients, and included the whole of the build-

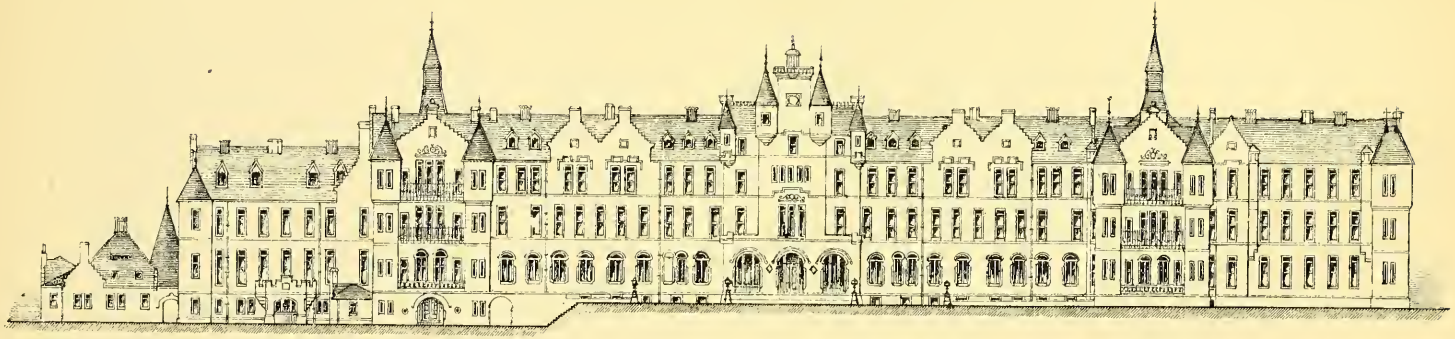
WESTERN INFIRMARY, GLASGOW.

BLOCK PLAN.



JOHN BURNET, SON, & CAMPBELL,
ARCHITECTS,
167, St. Vincent Street,
GLASGOW, *May, 1881.*

WESTERN INFIRMARY, GLASGOW.



ELEVATION TO DUMBARTON ROAD.

SCALE.

0 5 0 10 20 30 40 50 60 70 80 90 100 100 FEET.

JOHN BURNET, SON, & CAMPBELL,
ARCHITECTS,
167, St. Vincent Street.
GLASGOW, *May, 1881.*

ings required for administrative purposes. An arrangement was now made with the Directors of the Dispensary for Diseases of the Skin, whereby twenty beds were to be set apart for patients suffering from affections of the skin. An effort was also made to have the Children's Hospital, which was proposed at this time, built in connection with the infirmary, but this was not successful.

The sum originally decided to be given to the infirmary from the fund being raised for the new University was £24,000, but this sum was afterwards increased to £30,000. About the beginning of 1871, it was resolved, at a meeting convened by the Lord Provost of the city, to ask for subscriptions specially for the infirmary, there being a general feeling that the infirmary would be for the public good, and that it would therefore need public support. At this meeting a large general committee was formed, and at a subsequent meeting of this general committee three committees were appointed:—"(1) A Subscription and Finance Committee to take the more immediate charge of promoting the subscription, collection, and expenditure of the funds. (2) A Building Committee to take the charge and direction of all matters connected with the laying off of the site and the erection of the building. And (3) A Committee on the Constitution, to consider the best plan for the future management of the infirmary" (*Vide* First Report of Western Infirmary, 1873).

Building operations began in March, 1871, and the foundation stone was duly laid with masonic honours on 10th August, 1871. The undertaking had progressed so far by the end of 1873 that a dispensary for out-patients was opened in January, 1874, and the infirmary wards were opened to in-patients on 2nd November of the same year.

From 1875 to 1880 there were over 200 beds available for

patients. The growing demand for hospital accommodation is shown by the fact that in 1875 the average daily number of patients in the infirmary was 139, while in 1880 it was 199·5. In 1879 the munificent provision of £40,000, by the late Mr. Freeland, rendered possible the carrying out of the original plans, and, as a consequence, the doubling of the accommodation for patients. The erection of the new buildings was commenced in July, 1879, and the completed Freeland wing was formally opened on 1st June, 1881. A separate pavilion for the nurses, connected with the main corridor of the infirmary by a covered passage, was included in this extension. An erysipelas house, standing quite apart from all other buildings, and having accommodation for its own nurses, was afterwards built, and was opened in January, 1883.

Description.—The Western Infirmary stands on the highest portion of grounds upwards of 10 acres in extent, and the site, in itself a valuable one, is much enhanced by its direct continuity with the open grounds of the University and the West End Park. The building itself occupies about three-fourths of an acre, and consists of a central portion, containing the operating theatre, rooms for the resident medical staff, the kitchen, and also two wards; and two wings composed entirely of wards arranged in the form of pavilions, these wings being connected with one another and with the main building by three long corridors. The whole building is three storeys high, but owing to the slope of the ground, room has been found for the store, drug dispensary, receiving room for in-patients, and the whole out-patient department, on a ground floor below the level of the main corridor and front entrance. The ward pavilions open at one end upon an open space or hall, which practically isolates the wards on the same flat from one another. The other three sides of most of the wards

are freely exposed to the outer air, thereby ensuring cross ventilation.

There are 21 large wards in all, 14 of which contain 18 beds, and the others 8, 12, or 16 beds. Adjoining these wards there are smaller wards, holding from 2 to 3 patients. There is accommodation for 400 patients in all. The average cubic space for each patient is 1,650 cubic feet, and the superficial space is 110 square feet. There is only one bed between the windows, which are 3 feet 3 inches in width, and the centre of one bed is 8 feet distant from the centre of its neighbour. At the near end of each ward are the sister's room and the ward kitchen. At the farther end of each ward are the bathroom with wash hand basins and the w.c.'s with slop sink and urinal, entered through a ventilated lobby. These rooms in the newer or Freeland wing have their walls and floors tiled. The wards are warmed by open central fires, the grates being enclosed in casings into which air channels are led from the outer walls, fresh air at a comfortable temperature thus passing freely into the ward. Heat is also got from pipes, which are led round the wards and form coils at several places in their course. The water in these pipes circulates between a large boiler in the furnace house and several large air-tight copper tanks placed in the roofs over the wards. Each ward can be thrown out of the circuit at pleasure.

The wards are ventilated by means of four air shafts from each ward leading up to the aforementioned tanks. Fresh air is admitted at the fire-places and at each window recess, where there is a heating coil. Air can also be admitted when required at the ward windows. All the ward windows are double glazed.

A separate building to the west of the main building contains a medical lecture room, the pathological museum, the

post-mortem room, the pathological chemical laboratory, at present used for the purpose of bacteriological research, and the mortuary.

The total cost of the Western Infirmary, including the site, was £135,141, 4s. 11d.; or, taking the total number of beds as 400, £337, 17s. 7d. per bed.

Accidents and urgent cases are admitted into the infirmary at any hour and without any line, but ordinary applicants for admission have to bring a line of recommendation from a qualified subscriber. Each physician and each surgeon has a receiving day in rotation, on which day the corresponding resident medical officer is on duty. In cases of doubt as to admission, the superintendent has to be informed, and, if the patient is rejected as unsuitable, a form is filled up stating the reason, and signed by the receiving medical officer. Patients kept in longer than forty days require to have their lines of recommendation renewed. The following is a table of the average residence and average cost of patients for seven years:—

1st November to 31st October.	Average Residence.	Average No. of Occupied Beds.	Average Cost Per Patient.	Cost Per Occupied Bed.
1886-87,	37·2	364	£4 19 10	£49 0 3½
1885-86,	38·7	373	5 1 1	47 13 8
1884-85,	41·8	368	5 16 7	50 18 0
1883-84,	38	363	5 7 7	51 4 2½
1882-83,	38	368	5 5 5½	50 13 0
1881-82,	32·6	311	4 11 3	51 1 9
1880-81,	35	264	5 0 5	53 11 2

In the out-patient department no line of any description is required, but all applicants for advice must be unable to pay a doctor, and if medicine is required they must afterwards make special application to the clerk, who makes inquiries and grants the medicine to necessitous cases.

The nursing is done by nurses drawn from the educated classes and trained in the Infirmary. Three years are required for full training, during which courses of lectures on ordinary medical and surgical nursing, and on such special subjects as electricity and massage are delivered, and examinations have to be passed before a certificate is granted.

Medical students receive their clinical instruction in the wards from 9 to 11 A.M., and at the out-door dispensary in the afternoon. At present there are about 430 in attendance at the clinical classes of the various physicians and surgeons. The fees, which include the clinical lectures, are £21 for a life ticket, £10, 10s. for a year, £7, 7s. for six months, and £4, 4s. for three months.

The affairs of the infirmary are directed by a board of twenty-seven managers, nine of whom are elected by the subscribers, and the rest by such public bodies as the University, the Faculty of Physicians and Surgeons, the Town Council, the Merchants' and Trades' Houses, the Faculty of Procurators, and the Commissioners of four burghs.

The medical staff are elected annually, re-appointment being limited to seven years in the case of the dispensary physicians and surgeons. There are four visiting physicians, one physician for diseases of women, four visiting surgeons, three assistant physicians, five dispensary physicians, three dispensary physicians for diseases of women, three dispensary surgeons, two extra dispensary surgeons, one dispensary surgeon for diseases of the ear, one honorary consulting ophthalmic surgeon, one pathologist, one vaccinator, one dental surgeon. There are eight resident medical officers.

There are upwards of 120 of a resident staff, consisting of a superintendent, 8 resident medical officers, a matron, a matron's assistant or home sister, a night superintendent of nurses, 8 sisters, 58 nurses, a housekeeper, a cook, 4 kitchen

maids, 5 housemaids, 8 laundry maids, about 23 ward maids, a sewing maid, a clerk, and a page. In addition to these there are non-resident, a chaplain, apothecary and 2 assistants, storekeeper, master of works, janitor, clerk, 6 porters, 2 enginemen, 2 gardeners, a joiner, and a gatekeeper.

A. W. R.

GLASGOW HOSPITAL FOR SICK CHILDREN.

It is only since December 1882 that Glasgow has had any special hospital for sick children. Much earlier, however, movements had been made in this direction, and as far back as 1867 a considerable sum of money had been raised at a bazaar held for the purpose of founding such an institution.* Before even this stage was reached, there had been, of course, the usual controversy as to whether a special hospital for children was in any sense required, and as to whether, if established, it might not rather be injurious than useful. In the daily newspapers a somewhat sharp controversy was carried on by various leading practitioners. This controversy is referred to in the minutes of the original promoters, kept by Mr Andrew Macgeorge, their secretary, whose minute book begins on 23rd January, 1861. The practical victory, however, as evidenced by the success of the bazaar referred to, lay with the advocates of the scheme. The actual facts seemed to point to the failure of a general infirmary to provide for the accommodation and adequate treatment of any considerable

* This Bazaar, organised by the late Miss Clugston, was for the purpose of forming a Convalescent Fever Home and a Sick Children's Hospital. The financial statement, dated May, 1867, showed proceeds to the Children's Hospital amounting to £2,916.

number of children at the earlier ages, especially of those affected with the forms of internal disease usually treated in medical wards. While those opposed to a special institution could point to many children treated, no doubt, with much success in the female *surgical* wards of the Glasgow Royal Infirmary (then the only general hospital in the city) it appeared that but few children of tender years were ever actually treated in the *medical* wards; indeed, their presence there in any number would become a serious tax on the nursing arrangements which, of course, were designed for adult patients, while the petulance and crying of sick children, when they did find their way into the general wards, inevitably disturbed the rest of their adult neighbours.

Although the sum of money collected from donations and from the bazaar, amounting to over £6,000 in 1870, made it certain that a Children's Hospital, in some form, would be established in the city, various circumstances tended to create delays from time to time.

At this period the University buildings were being erected on a new site in the west of the city, and it was certain that an Infirmary must be erected near these buildings for the use of the medical school, and this was actually opened as the "Western Infirmary" in 1874. Pending these changes, negotiations were made as to having a site provided for the proposed Children's Hospital near these new buildings; or, it was proposed by some, that special wards, or a special wing of the Western Infirmary, might be set aside for children, with advantage to both institutions and to the University medical school. The promoters of the Children's Hospital evidently feared that any such arrangement as special wards in a general hospital might be readily broken down under the strain of

financial difficulties such as are always liable to arise in charitable institutions, especially as it was well known that efficient attendance on sick children is relatively costly, and that in a few years such special provision for children might cease to exist. The same objection did not exist to having a special building, under special trustees, within or near to the Infirmary grounds; but, although this was understood to be agreed to, and even a site selected in concert with a University Committee, objections were raised, at the last, by the Senate, and the negotiations had to be abandoned. In the meantime, of course, much time had been lost.

A committee was at length appointed in 1880, with instructions to proceed with the formation of a Children's Hospital, the funds having by this time accumulated to about £8,600. A site was purchased in Garnethill, at the corner of Buccleuch Street and Scott Street. Two dwelling-houses stood there, with a certain amount of ground in front of them. One of these was then acquired, and the other has since (1887) been purchased, and now forms part of the hospital. The dwelling-house first acquired was converted into rooms for the administrative department of the hospital, and a new building of four flats was erected on the ground in front, facing Buccleuch Street. The low or basement floor was appropriated for kitchen and similar purposes. The other three flats contain one ward each. This disposition of the building prevented a full carrying out of all the modern ideas of lighting and ventilation (as one side, of course, could not have windows); but great care was taken to have ventilation attended to. Double open fireplaces in the centre of the wards afforded means of heating and ventilation, and the gas used in the wards was made, by means of a ventilating shaft, to contribute to the purity of the air.

Hot water pipes were likewise employed in the heating of the lobbies, &c.

The wards being thus close upon the streets—and not situated in an open space in the country, as might have been preferred by many—the windows were painted, at considerable expense and with artistic effects, so as to reproduce Caldecott's well known illustrations of nursery rhymes, each window being a special gift from youthful subscribers. The walls are lined with cream coloured tiles for 6½ feet from the floor, and above that are smooth and easily washed. The floors are polished. The general effect of the interior of the wards is pleasing. Notwithstanding the influence of the painted windows, the absence of green grass or trees, and, indeed, the want of space around, constitute great defects—inseparable, however, from the situation, which was deliberately selected by the promoters as being central, easily accessible, and thus convenient, both for the poor of the city and for the medical officers in charge of the patients.

According to the *First Annual Report* (for 1883), the total cost of the hospital, including the site, fully furnished and equipped, was £12,510, 0s. 2d., or £215, 13s. 9½d. per cot. Of these cots there were 58 in the three wards, with 1 in the Isolation Ward. The cubic space per cot varied in the three wards from 736 to 836, the lower figure applying to the ward on the top flat. Some objection was taken to the cubic space in this ward being too small; and certain structural alterations were carried out in 1885, by which the cubic space was increased and some new windows added, which improved the ventilation.*

According to the *Fourth Annual Report* (for 1886), the

* The writer of this notice considers that the cubic space named above is considerably under what is desirable for a Children's Hospital—in particular, that the floor space in these wards is too small.

following was the cost of treatment for that year,* the average daily number of patients being 51:—

Average cost of each cot for year (1886), . .	£42	6	5·9
,, total cost of each patient treated, . .	4	6	0·8
,, cost of each patient per day, . . .	0	2	3·8
,, daily expenditure, ...	5	18	3·1

The funds of the Children's Hospital were greatly augmented by the success of a Fancy Fair, held in Glasgow, in 1884, under the presidency of the Duchess of Montrose. The total amount drawn was about £17,020, and the finances of the Fair were so carefully managed by Miss Grace Paterson, of Glasgow, that £15,763, 12s. 10d. were handed over from this source, the total amount actually obtained, including some important donations, being over £20,000. The objects aimed at in this effort were to provide funds for a small permanent endowment for the Hospital, and to assist in the erection and furnishing of an out-patient department.

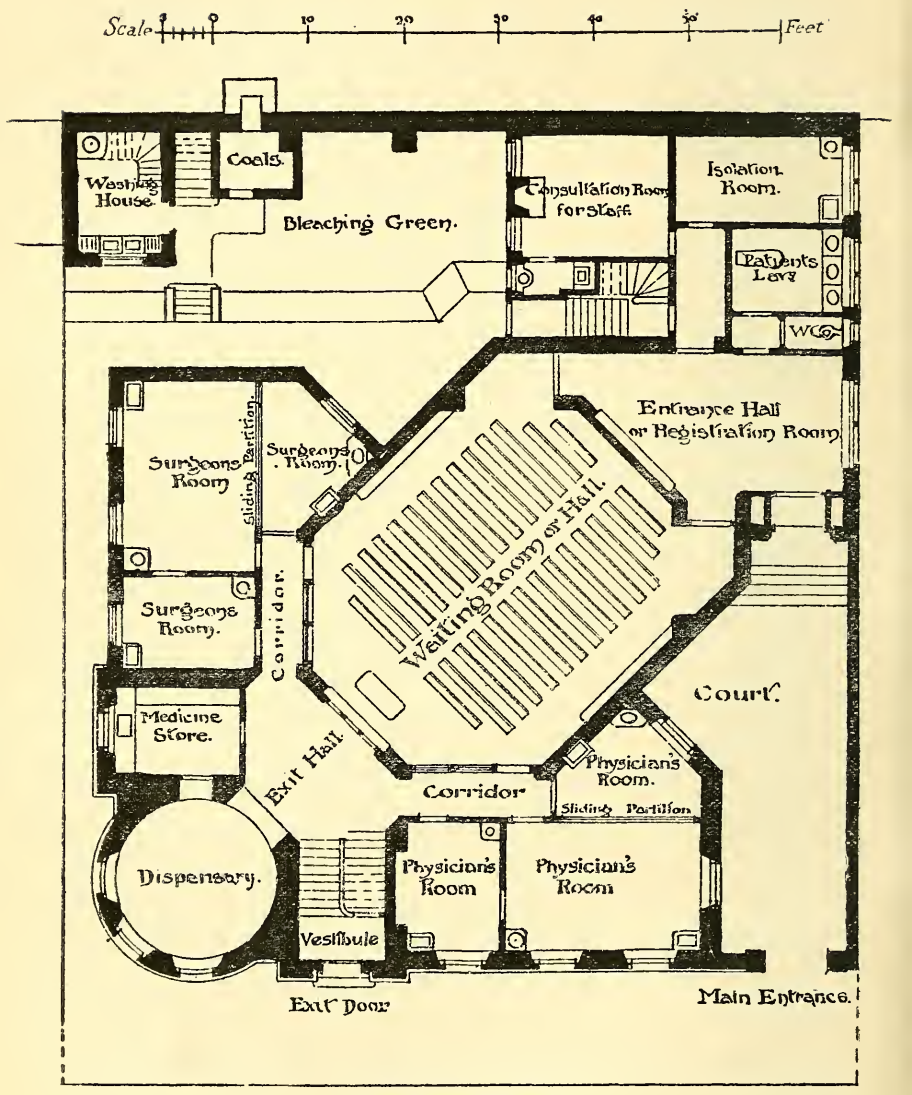
In 1887 the house and ground immediately to the west of the Hospital were acquired, and these proved valuable acquisitions. Considerable improvements were at once carried out, particularly as regards the accommodation of the nurses, the enlargement of the operating room, and the erection of more suitable washing houses; and, in addition, the main floor of the dwelling house, thus acquired, was converted into one ward, of L shape, nicely heated and lighted: some of the windows look out to the ground in front, and all of them in this ward are without paintings. This ward, giving 12 additional beds, was

* This year is selected because by this time the hospital, as originally planned, was in full operation. By next year the hospital was somewhat extended, and the cost, as given in the *Fifth Report*, is somewhat less (£40, 15s. 9d.)

opened in October, 1887, chiefly through the generosity of Mr. Thomas Carlile, the Chairman of the Directors, and so the two physicians and the two surgeons on the staff have now one ward each under their care, instead of the surgical ward being divided between the two surgeons, as at the first, when only three wards were available. In addition to the four visiting physicians and surgeons, the honorary staff includes an assistant physician and surgeon, an ophthalmic and an aural surgeon, a dentist, and a pathologist.

The mortuary was the gift of the late Mr. James T. Whitelaw, who took a very active part in the erection of the Hospital, and who was, till his death, Chairman of the Board of Directors. It is very artistically designed, and it was hoped that this might have a soothing effect on the parents when they came for the bodies of their children who had died in the hospital.

The admission of patients to the Sick Children's Hospital is by "subscribers' lines," the plan followed at the two general infirmaries. Although this is the rule of the institution, the practice has been followed, from the first, of admitting cases sent in by any medical practitioner, the house surgeon obtaining from some of the directors the needful "line." Indeed, many cases sent by various persons and institutions are admitted at once if there happens to be room at the time and if the case seems suitable for *in-door treatment.* Not unfrequently, however, weak or ricketty children are sent by benevolent visitors of the poor, whose cases are quite unsuitable for treatment in a hospital situated, as this is, in the centre of a crowded city. There are always cases waiting admission, and at times as many as 50 patients' names appear in the book as anxious for treatment, but not able to obtain admission for want of greater accommodation.



PLAN OF PRINCIPAL FLOOR OF OUT-PATIENT DEPARTMENT, GLASGOW SICK CHILDREN'S HOSPITAL.

Although this Hospital has been open since December, 1882, for the treatment of sick children in the wards, it is only during the summer of this year (1888) that arrangements will have been completed for the treatment of out-patients. This delay has been unfortunate in various ways; and indeed, in the opinion of many, the establishment of an out-patient department ought rather to have *preceded* the opening of the wards. A very large proportion of the ailments of children, especially at the earlier years, can be better and more economically dealt with in the out-patient department, and a selection of suitable cases, only possible from the large field of out-patients, would make the treatment of cases in the wards more profitable in every sense. In the first years of this Hospital, not a few of the children admitted to the medical wards were scarcely suitable for treatment there. With the advance of time more suitable cases have of late been admitted, but with an efficient out-patient department a better selection of cases —*i. e.*, of cases pre-eminently adapted for in-door treatment, could be made, and so the expenditure of the Hospital applied to greater advantage.

The site secured for this important branch of the Hospital is within five minutes' walk of the wards. It is near the corner of Cambridge Street and West Graham Street, and is readily reached by tramway from any part of the city. Great pains have been taken in the design of the buildings to secure the comfort of the children and the convenience of the special staff to be attached to this department.

The patients are to be admitted by a court or covered way, where perambulators may be left protected from the weather, and this leads to a vestibule where they are to be registered and then transferred to the waiting-room, which is a large, airy apartment. On either side of this there

are three consulting rooms, *en suite*, for the physicians and three for the surgeons. A dispensary for supplying medicines is situated near the exit door, which opens to the street without interfering with the entrance door or the due circulation of the patients. In an upper flat there are rooms for the specialists who may be required at times for special cases, and there is likewise accommodation for one or two nurses or others in charge of the building, who may have to assist in the preparation of the out-patients for the medical officers. Ample and suitable lavatory accommodation has been provided for the little patients and their attendants. The building has been erected from plans by Messrs. Douglas & Sellars, architects, Glasgow, who also prepared the plans for the Hospital.

The organisation of the out-patient department is now under consideration (June 1888). The staff will, of course, be distinct from that of the wards. It is understood to be the intention of the directors to have this department open for advice to sick children without the formality of subscribers' lines, but to take measures for securing, through the Charity Organisation Society or otherwise, that only those unable to procure medical advice for themselves should be registered as patients of this institution. Medical visitation of patients at their homes is not contemplated.

In the foundation of this Hospital the interests of medical education and of the various schools of medicine in Glasgow were kept in view, and it was hoped that its central position would facilitate the attendance of students. As yet these hopes have not been realised. A few students have indeed attended the practice of the hospital,* but its

* One or two ladies from the London Zenana Medical College have attended and received instruction at this Hospital while supplementing their practical studies by a residence in Glasgow.

distance from the University and the difficulty students experience of finding time for any extra courses in the present crowded state of the curriculum probably account for the small number of students who have as yet availed themselves of this hospital's practice. With the establishment of the out-patient department, where practice among children can be really better learned than in the wards, some further interest in this important branch may be aroused among the students; and if the curriculum is lightened, or the period of study extended, it is quite certain that many students would gladly seek to acquire some practical knowledge of those diseases which, in the actual work of the profession, bulk so largely. For the study of the infectious diseases of children, the Fever Hospital at Belvidere presents a field probably unrivalled in the Kingdom, but almost wholly neglected by the medical students of Glasgow.

There is in the Sick Children's Hospital a part of the buildings detached from the general wards containing an isolation room, where a child can be placed when presenting suspicious signs of infectious disease, or kept for a time after these have declared themselves, till removal can be effected. In a few instances of infectious disease arising in the hospital, especially where serious surgical operations had been performed, and when removal from the hospital might have been dangerous, a child has been treated "in isolation" till the period of infection was past. Adjoining this little ward there is accommodation for a nurse, who is also placed "in isolation" while attending such a case.

The treatment of infectious diseases, however, is not attempted in this hospital, and whenever they appear the children so affected are promptly removed to the Fever

Hospital at Belvidere. The medical staff of the hospital and also the directors were alike unanimously of opinion that infectious diseases should not be admitted to the Children's Hospital if recognised as such, and that all such cases arising in the wards should be removed with as little delay as possible, telephonic communication rendering this, as a rule, very easy, whenever the diagnosis is established.

The only exception made was in the cases of diphtheria (or so-called croup), but only when it seemed to require surgical interference. It was felt that in such cases, which might be sent at any hour in a state of great urgency, a recommendation to take the child to the Fever Hospital, three or four miles distant, might imperil seriously the chances of successful treatment, and that the lesser evil was to deal with such cases with as much separation as circumstances permitted of. Recent experience has seemed to show that this course is perhaps attended with somewhat greater risk than was supposed at first. Some of these cases have been treated in the isolation ward, and so the danger has been greatly lessened, at least as regards the other children.

J. F.

BARONY PARISH HOSPITAL,

BARNHILL.

THE Barony Parish has a population of 289,457, and covers an area of 13·91 square miles, or 8,907 acres, with a rental of £1,574,020. The medical work carried on under the Poor Law falls into two parts, the in-door work at the parish

hospital and asylum, and the out-door work at various dispensaries throughout the district.

The large institution at Barnhill, Springburn, on the north-east side of Glasgow, contains the poorhouse and hospital, and it may be mentioned in passing that the former contains 1,049 beds, the inmates being classified as infirm, turn-out, and test cases. The institution was opened in 1853, and originally had licensed wards for the treatment and cure of lunatics; but when the Asylum at Woodilee, Lenzie, was opened in 1875, the insane cases were removed thither from Barnhill, and these wards were re-arranged for the reception of children. The hospital contains 380 beds, and the number of patients treated during 1887 was 3,191, the average daily number in the hospital being 328, and the death-rate being 9·9 per cent per annum. Patients are admitted on orders and certificates granted at the Parish Chambers, 38 Cochrane Street, subsequent to inquiries made by inspectors; and unless the parties are houseless, or otherwise in need of immediate hospital treatment, the cases are first brought before Daily Relief Committees, who decide what is to be done. An important change in the treatment of the sick took place in 1882, when trained nurses were first employed, for before that time the nursing was undertaken by pauper inmates, who were badly qualified for such a duty. The nursing staff, under a lady superintendent, consists of 13 trained nurses and 12 probationers; and the last undergo a two years' training, and, if found suitable and properly qualified, are then registered as trained nurses by the Board of Supervision, Edinburgh. There is a medical superintendent and an assistant physician, both resident.

The out-door work is executed by nine medical officers, attached to different districts, one of them giving his entire time to these duties. There are three public dispensaries,

where medicines are supplied. But, besides this, the officers see urgent cases at their own private dispensaries and houses, and also visit the patients at their homes. During 1887 there were 8,101 out-door cases treated, involving 11,565 consultations at the dispensaries, and 6,288 visits to the patients' homes; the number of prescriptions issued being 13,554. The officers have to certify all applicants for parochial relief, including lunatics, and attend all paupers within their respective districts, whether belonging to the Barony Parish or otherwise. Parties are attended to on presentation of a certificate, issued at the Parish Chambers to all applicants for medical relief who are homeless and destitute, or requiring immediate attention, and also on paupers presenting their pay-cards.

C. F. P.

THE TOWN'S HOSPITAL OR CITY POORHOUSE.

This institution is for the poor of the City parish of Glasgow, and is under the management of the City Parochial Board. It is conjoined with the Parochial Lunatic Asylum, a short account of which is given in another section. They are situated in Parliamentary Road, to the north of the business centre of the city, and not above five or six minutes' walk from the Royal Exchange. Though they have separate buildings and grounds, the offices, stores, and kitchen are common to both, and in these important respects they are parts of one establishment. Together, inclusive of their airing grounds, they occupy an area of about eleven acres, and are for the most part enclosed by a wall. Of late years, through the growth of the city, they have become surrounded on all sides by streets and buildings of various kinds, and especially on

the east are much exposed to the fumes and smoke from chemical and other works.

The name, "Town's Hospital," was given to the original poorhouse and asylum of Glasgow, the site of which was on the north side of the river Clyde, not far from the present courthouses and jail. An old minute book bears that on 29th January, 1734, the Directors "agreed that the house thereafter go under the designation of the Town's Hospital;" and this designation, kindlier and more considerate in its significance than poorhouse or workhouse, has been applied to it up to the present time, a period of more than a century and a half.

When the city had increased in size, it was found that the accommodation in the "Hospital" was inadequate for the wants of the parish, and the Parochial Board in the year 1843 acquired by purchase the nucleus of their present property from the Directors of the Royal Lunatic Asylum, who had just erected the palatial edifice at Gartnavel for the Insane of Glasgow and the West of Scotland, and removed their patients to it.

The centre building of the joint institution is therefore the old Royal Asylum. It is a very substantial structure, and consists of a great central staircase, surmounted by a dome, which is one of the most conspicuous objects in Glasgow. Opening on this from three floors, besides the basements, are four wings which extend outwards in different directions. This plan of construction as an asylum had the serious objection that it presented facilities for suicide by jumping over the balustrade into the well of the stair; and report says that such suicides did occur.

When it passed into the hands of the Parochial Board, most of the wards were devoted to the accommodation of the more respectable of the ordinary poor, but a portion of the ground

floor was reserved for the harmless insane. Soon afterwards, an hospital for the sick to the south, and a test-house on the north of the central block were erected, and the former was extended towards the east, about twenty years ago, by the addition of a section of the old Magdalene Institution, for whose inmates more suitable provision had been made in the new establishment at Maryhill.

Excluding the insane, the City Poorhouse or Town's Hospital is licensed for 1,611 ordinary inmates, with their officials, and throughout the winter it is full to overflowing. The City is the central parish of Glasgow; and the Royal Infirmary, Night Asylum, Central Police Office, Sailors' Home, and large Model and numerous private lodgings for the poorer classes are situated within its bounds. Owing to this fact a larger proportion of the admissions into its poorhouse than into the corresponding establishments of the other two great parishes into which Glasgow is divided—the Barony and Govan—are seriously disabled by sickness. Contrary to the general impression, the amount of acute disease, especially of organs in the chest, is very large; for very many of the denizens of the lodging-houses, &c., when they are prostrated by illness, have no means of obtaining subscribers' lines to the Infirmaries, which are necessary for their admission into them, and have no resource save the poorhouse.

There are twenty-five wards in the department for the sick, which contain 428 beds; but, in addition, it is usual to convert two or three of the ordinary into sick wards during the winter and spring months, owing to the increase of patients. The average daily number under medical treatment during the year ending 14th May, 1888, was 444. In the course of a year, from six to seven thousand cases are treated, but a large number of these have only trivial ailments. The annual mortality ranges from four to six hundred, many dying within

a week after admission. The average weekly cost per patient is about five shillings. There is also a lying-in ward, and the annual number of births is from eighty to a hundred. Formerly it was much higher, but the erection of the new Maternity Hospital at a short distance has been the means of withdrawing many women who otherwise would have gone to the poorhouse. Though not much can be said in favour of the lying-in ward, it has almost always enjoyed a striking immunity from all forms of puerperal septicæmia, and the women have usually made excellent recoveries.

The medical staff consists of a resident physician and a qualified assistant, who devote their whole time to the medical work of the institution. A consulting physician to the hospital visits daily, and he has likewise the medical charge of the asylum. There are also two dispensers, whose time is fully occupied in making up the medical prescriptions for so large a body of sick.

It is clear that where there is such an immense mass of disease, with a large mortality, there must be an excellent field for clinical and pathological research. In this connection the question arises, Could this, and possibly also the other two poorhouses of the city, not be utilised for medical tuition? Advantage has been taken of the City asylum for this purpose, the present consulting physician having for very many years given clinical instruction in mental disease, often to large classes of students. No great difficulty would probably be found in making similar arrangements for the study of medical cases at the Town's Hospital, provided it were shown that the clinical material for the teaching of students in this part of the city was in any way deficient.

A. R.

GOVAN POORHOUSE.

THE Govan Combination Parish—the population of which in 1881 was 238,000, and from its rapid growth is this year estimated at 260,000—is furnished with a large poorhouse for ordinary paupers, and a parochial hospital for the treatment of the sick poor, at Merryflatts, three miles from Glasgow, on the Renfrew road. The whole is under one administration.

The Hospital contains 240 beds for the reception of medical, surgical, and obstetric cases; and the average number of cases treated yearly is about 850. The nurses are unpaid, and consist entirely of such women as can be selected for the purpose from the ordinary inmates of the Poorhouse. They are overlooked and guided, and their imperfect knowledge is, as far as possible, supplemented, by a superintendent and assistant superintendent. These are trained nurses, and are responsible for carrying out the instructions of the medical officers.

W. R. W.

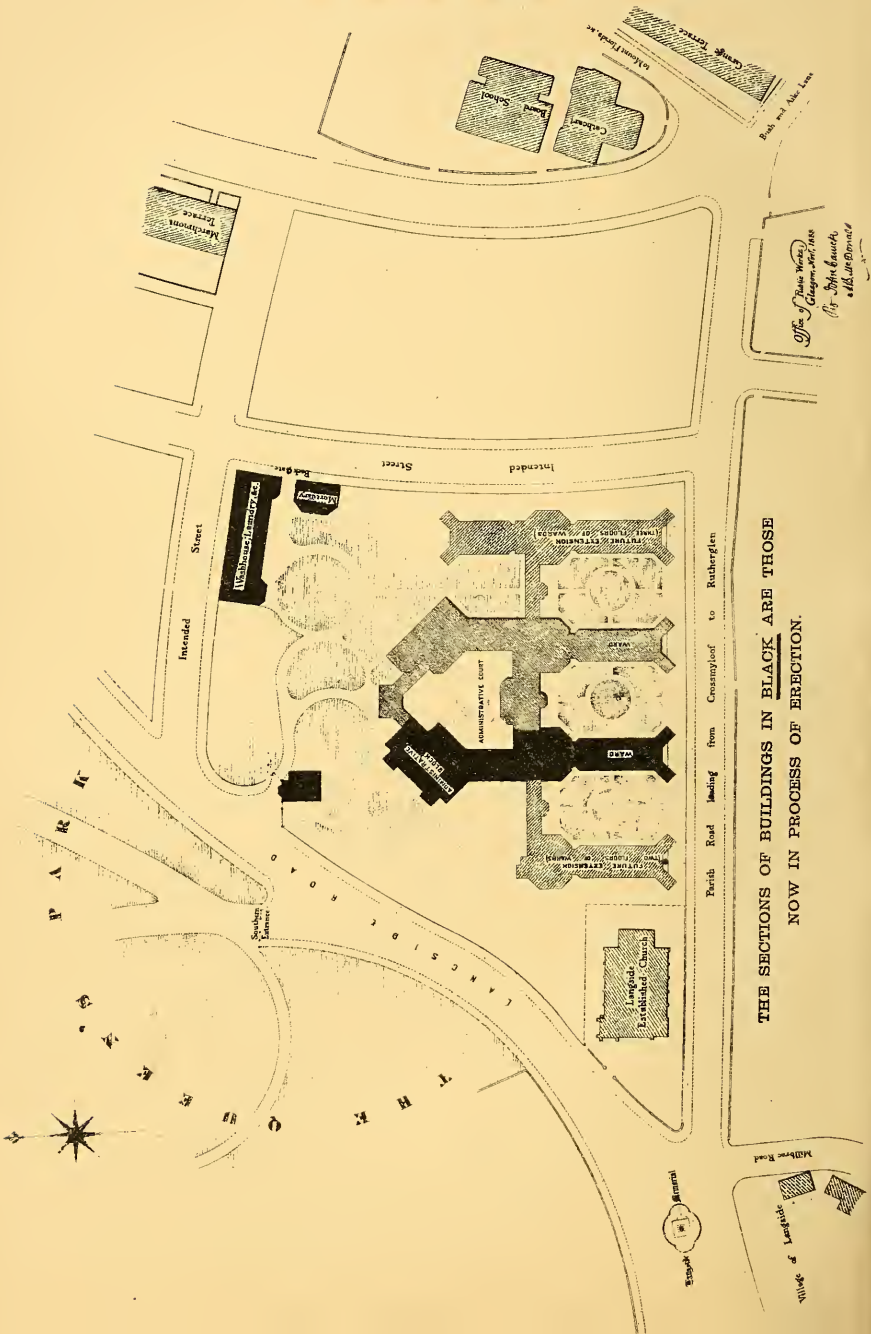
THE VICTORIA INFIRMARY OF GLASGOW.

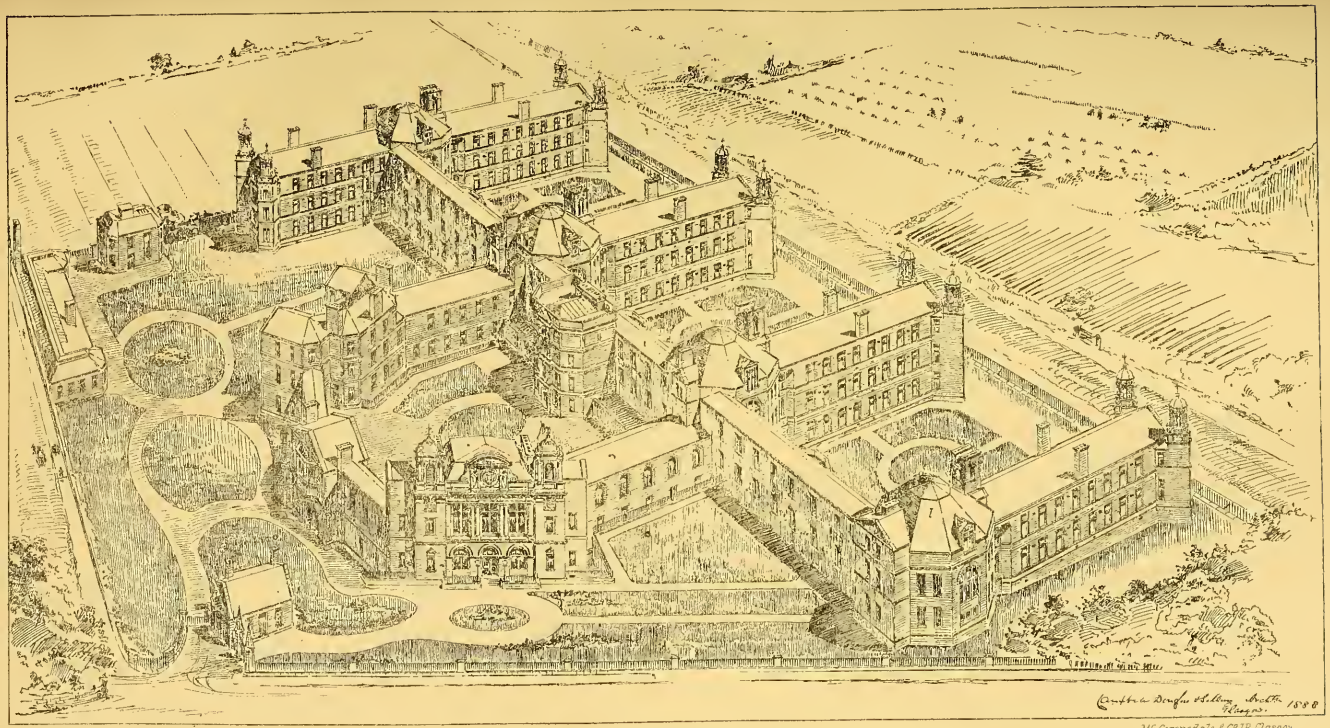
THE origin of the movement for the erection of a hospital on the south side of Glasgow may be briefly stated as follows. In May, 1871, Dr. Eben. Duncan read a paper before the Southern Medical Society, entitled, "A Plea for a Hospital on the South Side of Glasgow, based on the inadequacy of the existing Glasgow Infirmaries." At that meeting a committee was formed, including most of the members of the Society, to promote the scheme of hospital extension advocated in that paper. To start the subscription list, Dr. Scott, of Rutherglen, offered to subscribe the sum of £500, an offer

THE VICTORIA INFIRMARY.

PLAN SHEWING THE SITUATION OF THE PRESENT BUILDINGS AND THE CONTEMPLATED EXTENSIONS, &c.

Messrs. Campbell Douglas & Sellars, Architects.


Intended Street
Parish Road leading from Crossmyloof to Rutherglen
Laundry
Mortuary
Workmen's Lavatories
Administrative Light
Ward
Ward
Ward
Ward
Langside Established Church
Langside Parish Church
Langside Free Church
Langside Hall
Langside Manse
Langside Public School
Langside Public School
Victoria Terrace
Victoria Terrace
Victoria Terrace



THE VICTORIA INFIRMARY OF GLASGOW.

which he has since implemented. After two years' active exertion by the medical men practising in the Southern district, the sum of £6,000 was subscribed, and promises of support were given by the principal employers of labour.

In April, 1881, a large and influential public meeting was held, and it was unanimously resolved that "a Public Hospital should be established and erected in a convenient locality on the South Side of Glasgow." A committee was appointed to give effect to the resolution, and the Corporation of Glasgow was approached regarding the grant of a site, the result being that a very fine site of 4½ acres, in the Queen's Park, was generously granted by the Corporation. It may be interesting to note that the site granted is the spot on which the battle of Langside was fought 300 years ago.

Having acquired a site, the committee invited architects to submit designs showing how this ground could be best utilised for hospital purposes; and, after careful consideration, the committee recommended the plan of Messrs. Douglas & Sellars of Glasgow—the task of adjudicating on the various plans having been deputed to Mr. Carrick, the city architect, and Dr. J. B. Russell, the medical officer of health for Glasgow.

While the necessary arrangements for building were being made, the death of Mr. Robert Couper of Cathcart took place. He, by his will, left the residue of his estate for the erection of an Infirmary and Convalescent Home on the South Side. This delayed proceedings for several years; but an arrangement was ultimately effected, according to which the infirmary receives a sum of £10,000 now, and a reversion of about £40,000 additional on the expiry of certain life interests.

A second public meeting was held last year, at which it

was announced that Her Majesty, the Queen, had allowed the infirmary to be called by her name, in commemoration of the jubilee year.

A sum of £17,000 has now been subscribed by the public, excluding the £10,000 to be received from Mrs. Couper; so that, after paying necessary expenses, amounting to about £1,000, the committee are in possession of £26,000, with the reversion of £40,000.

An Act of Incorporation has been obtained from Parliament, which contains a clause permitting the managers to grant facilities for the teaching of medicine and the allied sciences.

There is an important clause in the constitution of the Infirmary, which provides for the election of workmen governors, so that the working men who are subscribers may have direct representation on the Managing Board.

The site is about half a mile south of the present municipal boundary, but is conveniently near to important industrial centres which are certain to increase and extend in the future. It will, however, be within the municipality when the extension of the boundaries, which is expected in the near future, takes place.

The building, which is now in course of construction, is designed according to the most recent principles of hospital planning and construction, and it also possesses some novel and interesting features. When completed the scheme will provide a fully equipped hospital, with accommodation for 250 beds, arranged in four main ward blocks of three floors, each complete in itself, and connected only by a wide corridor. The blocks are thus practically isolated in the first instance, and the wards in the same block are, as far as possible, isolated from each other by a ventilated passage, interposed between the ward and the common staircase.

The administrative block and the kitchen and stores

department are in separate buildings connected with the ward blocks by corridors. Only one block, containing three wards for 18 beds each, and the administrative block are being erected in the meantime. Part of the latter block, however, will be temporarily used for wards, and provision is made for about 80 beds in all. The other ward blocks will be erected as the necessity for them arises.

J. C.

Special Hospitals.

—o—

CITY OF GLASGOW FEVER AND SMALL-POX HOSPITALS.

BELVIDERE.

In Glasgow, as in other towns, the treatment of infectious, as of other ailments, was, until a comparatively recent date, left to the managers of the general hospitals supported by voluntary subscriptions. The Royal Infirmary was opened in 1794. In 1350 the Leper's Hospital of St. Ninian was built and endowed by a lady of the family of Lochow. It stood at a little distance from the south end of the old bridge of Glasgow. References are made to it as late as the beginning of the seventeenth century, and a local reminiscence still remains in "St. Ninian" Street. Provision was made in successive epidemics out of the burgh funds for the treatment of those stricken with plague. In 1646, wooden huts were erected on the Town's Muir, at a considerable distance from the town, to which the infected were transported, and where they received medical care. In 1818 the first great epidemic of the modern plague, typhus fever, reached its height. In that year it supplied 60 per cent of all the patients treated in the Royal Infirmary. In 1829 the Managers built a separate fever house, which

was enlarged in 1832 to 220 beds. But this was a mere nucleus for the accommodation and administrative organisation necessary to meet the needs of Glasgow in frequent epidemic expansions of typhus and small-pox, and rarer invasions of cholera and relapsing fever. Not merely private subscribers, but public authorities, municipal and parochial, all depended for help, or discharged their obligations to those for whose treatment in sickness they were legally responsible, through the agency of the Royal Infirmary. From time to time the Managers erected temporary "fever sheds" on their own grounds, or took charge of temporary district hospitals in the city and suburbs, either erected by themselves or by the magistrates. They had even to meet an action for interdict, raised by neighbouring proprietors, against the use of a district hospital in Bridgeton, and at their own charges carry their case to a successful issue through several appeals. Nor were they adequately subsidised by the authorities for their services. They had constantly to struggle against the drain on their charitable resources maintained by public authorities, who sought thus to save their rates from a legitimate charge.

As might be supposed, such a system was not successful in preventing epidemics. During its continuance the utmost limit of fever hospital accommodation ever provided, before or since, in the city of Glasgow was reached. In 1847 typhus prevailed with unexampled severity. After the Infirmary was exhausted, the City Parish turned the old Town's Hospital, on the Clyde Side, into a fever house, and the Barony Parish put up fever sheds in Anderston. In one way or another 1,254 beds were provided. In that year 11,425 cases received hospital treatment.

The lesson of these events was not missed by the rulers of Glasgow, although it was learned slowly and was at first

misread. In extenuation of this local misapprehension, it must be admitted that it was encouraged by the errors of general legislation. Epidemics were regarded as natural phenomena, not to be averted, but only to be met by *pro re nata* provisions. In the Nuisance Removal Acts, beginning with 1856, it was provided that on the outbreak of epidemics the Privy Council might, by order, confer extreme powers on Local Authorities to adopt certain measures for their suppression, which included the provision for the sick of "such medical aid and such accommodation as may be required." In the Glasgow Police Act of 1862 similar local powers were obtained, to be evoked upon the report of the medical officer "that epidemic, endemic, or contagious disease prevails or exists and threatens to prevail" in any part of the city. In the winter of 1864-65, typhus compelled Dr. Gairdner to call upon the Authorities to provide temporary accommodation. After considerable difficulty in procuring a site, a pavilion hospital, containing 136 beds, was erected, from plans drawn by Mr. John Carrick, Master of Works, off Parliamentary Road, and opened 25th April, 1865. Although much valuable time was lost, this hospital proved to be of such service that when the Police Act fell to be revised in 1866 a clause was inserted binding the Local Authority "to maintain the present hospital erected by them in Parliamentary Road," and conferring powers to enlarge the same or provide and maintain other hospitals. Glasgow thus took the lead in Scotland in providing and binding itself to maintain a permanent fever hospital. Next year the Scotch Public Health Act was passed in which all Local Authorities were empowered to make the like provision. In 1869, typhus necessitated the extension of Parliamentary Road Hospital to 250 beds. In 1870, relapsing fever invaded the city, and this accommodation was speedily exhausted.

After the usual trouble in obtaining a site, during which the epidemic spread rapidly, from cases being treated at home, the estate of Belvidere, extending to about 32 acres, was purchased for £17,000, converted to a ground annual of £680. Although the intention was ultimately to erect a permanent structure, the necessities of the occasion were so urgent that wooden pavilions of the most temporary description had to be run up. These were occupied as completed, until, in three months, 366 beds were provided and filled. The old mansion house and offices accommodated the administrative departments with some alterations and extensions.

The present Small-Pox Hospital was the first erection in permanent material at Belvidere. The hospital off Parliamentary Road was reserved for small-pox after the relapsing fever epidemic subsided, but, owing to the rapid extension of the town in its neighbourhood, it had come to be closely environed with dwelling houses. A grave suspicion soon arose that the disease was disseminated in the vicinity, which led to a resolution in November, 1873, to build a Small-Pox Hospital. A deputation was appointed to visit and inspect the best examples of hospital construction in England. After they had reported, the plans, as finally adjusted, were submitted to the Board of Supervision and approved, without alteration, in June, 1874. In the following November, operations were begun, and the hospital was completed and formally opened on 5th December, 1877. It contains 150 beds, with 2,000 cubic feet of space for each. There are 10 wards arranged in 5 totally isolated pavilions. These, with the usual administrative accommodation, also broken up into detached blocks, all one storey in height, except the house for the higher officials, which is two storeys high, are enclosed, with ample recreation space, within a wall. The Small-Pox Hospital has thus no connection

with the Fever Hospital excepting that there is a central system of boilers, from which steam is conveyed to both institutions for the purposes of heating and the supply of warm water for washing, &c. The total cost of this hospital was £30,235, exclusive of site or the share of the central heating apparatus.

It would be tedious to narrate the history of the permanent Fever Hospital, as it has grown up from year to year by substitution, addition, and reconstruction into its present form. It began, as we have seen, with temporary wooden pavilions, and large sums were spent in maintaining these for some years and providing administrative accommodation. There was thus a complete Fever Hospital which has been entirely swept away. Through all the operations by which this has been effected, it was of course necessary always to keep up a working hospital. Various results necessarily follow from such a history; one, that the total amount of money expended at Belvidere considerably exceeds the sum represented by the existing buildings; another, that even the present Hospital has cost more than it would have done had it been built at once from a general plan; and yet another, that it is not so well proportioned in all its parts as if these parts had been contemporaneously erected. By a recent vote of the Town Council, it has been resolved to expend £10,000 in providing a new washing-house, dispensary, stores, and cottages for the house-steward and subordinate male servants. This will bring up the total expenditure on the present Fever Hospital and grounds to close upon £90,000.

Belvidere is situated about 2½ miles east of the Royal Exchange, on the extreme verge of the Municipal boundary. It is bounded on the N. by London Road, on the S. by the Clyde, on the E. by the pumping station and reservoirs

of the Corporation river supply works,* on the W. by private property as yet unbuilt upon. A photograph of Belvidere House, as well as a history of the estate, will be found in *The Old County Houses of the Old Glasgow Gentry,* where we learn that, during over a hundred years, it has passed through the hands of several of our merchant notabilities. The grounds possess great natural beauty, rising gently as you approach the Clyde, where they are broken by three small glens, once the beds and sloping banks of three streams. The whole estate is well wooded, especially along the avenue and western boundary, where the rooks have recently established themselves in the tops of the old beeches. The convalescents are allowed to wander at will over the many beautiful walks, and in summer it is one of the most pleasant of sights to see the children rolling about on the grassy slopes of the glens, and the seats, placed here and there, occupied by groups of people who for the first time in the lives of many are tasting of the sweets of Nature. At the rear of the Fever Hospital, several acres are laid out as a flower garden, with a green house, from which the wards are supplied with potted plants. Flower plots are distributed here and there between the pavilions and in other open spaces. At a distance of some four miles southwards the wooded heights of the Cathkin Hills close in the horizon.

The whole buildings, except that occupied by the medical and nursing staff and matron, are built of brick. The wards are distributed in pairs, in 13 totally isolated pavilions, all running N. and S. They are 60 feet apart laterally, and are placed in rows of 2, 3, 4, and 4, in succession from the bank overlooking the Clyde towards London Road. They have thus, to one standing in their

* Clyde water for use of factories.

midst, the appearance of a large, uniformly laid off village. Each pavilion is only one storey in height, with a well-ventilated basement beneath, so that the level of the ward is reached by a flight of steps. The two rows of four pavilions are separated by a range of buildings running E. and W., the centre of which contains the kitchen, one storey in height, and, like the pavilions, open to the roof. At either end there is another storey, the eastern accommodating various stores and the dispensary; the western, the under servants' bedrooms. At London Road there is a main lodge controlling to the W. the entrance to the Small-Pox Hospital, and to the E. the approach to the Fever Hospital. At the S. end of this approach is the Fever Lodge and Enquiry Rooms for patients' friends, with the Dorcas Society's stores in an attic storey, and running N. along the avenue, the Morgue, with room for funeral parties, with entrance from the road, so that hearses, &c., do not come within the Hospital enclosure. Just inside this gate is the washing-house and laundry, with the suite of steam boilers to the S., a cremator for soiled beds, and the central coal depot. The boilers are 3 in number, double-flued, and in size 7 feet 6 inches by 26 feet 4 inches. Further S. are a smithy, carpenters' shop, and fire-engine station. South-westward, some 40 yards, are the stables, ambulance shed, &c. Still westward is a large three-storey stone block, erected on the site of the old mansion house, containing 84 single bedrooms for nurses, with recreation rooms on each flat. These occupy the lateral wings, while the centre is reserved for the matron and medical staff. In front of this building there is a spacious lawn, with tennis court, bounded southwards towards the Clyde by a sloping bank planted with trees.

City of Glasgow Hospitals, Belvidere.

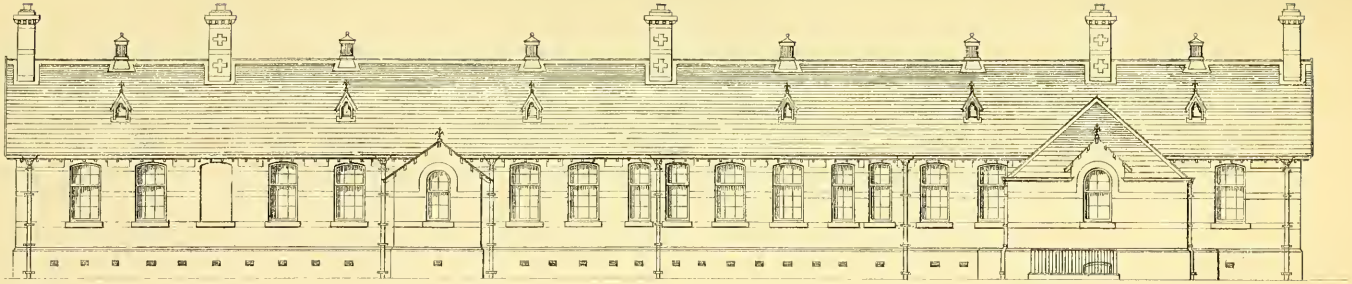
Block Plan.

SCALE

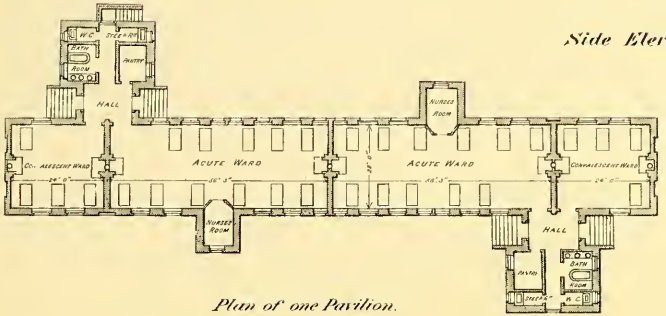
100 50 0 100 200 300 400 Feet

John Carrick.
Office of Public Works.
Glasgow, June, 1888.

City of Glasgow Hospitals. Belvidere.

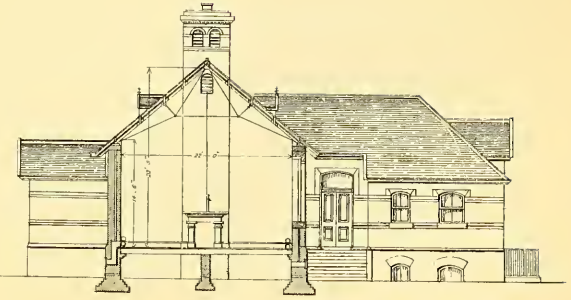


Side Elevation.



Plan of one Pavilion.

Scale



Cross Section

Scale

John Carrick.
Office of Public Works
Glasgow June. 1888.

Robert Gardner & Co. Lith. Glasgow.

There are 390 beds on the scale of 2,000 cubic feet for adults; but as a large proportion of the patients are children, for whom 1,200 feet is sufficient, a much larger number of patients can be accommodated. The dimensions of every pavilion and ward are exactly the same; but as they were erected at different times, sundry little but important differences exist. The two southern pavilions were built last, and the description of one will suffice. It has a basement 8 feet from ground to floor level. The outside length from end to end is 168 feet; the outside breadth, 26 feet; the height, from ground level to ridge of roof, 32 feet. There are two wards, each divided into a convalescent and acute ward. A flight of steps on both sides gives access to a vestibule, from which, on one hand, are the entrances to these subdivisions, while, on the opposite side, is the pantry, opening directly off the passage, and a lobby, to the left of which are the bath-room and water closet, and to the right a steep-room for soiled linen, these last being farthest from the wards. All these appurtenances are therefore completely isolated in a projecting annexe. The entrance and annexe of each ward are on opposite sides of the pavilion. On the side opposite to the entrance of the acute ward is a nurse's duty room, where there is a "poison press" and napery press, with chairs and a table. The front projects into the ward with sloping roof and glass sides, giving a full view of the ward. The internal dimensions are as follows:—*Acute Ward*—length, 56 feet 3 inches; *Convalescent Ward*—length, 24 feet. In both the breadth is 22 feet; the height to the wall head, 14 feet 6 inches; to the roof tree, 23 feet 9 inches. The floorage of the acute ward is 1,237 square feet; of the convalescent, 528 square feet. The total cubic contents of the acute ward are 23,500 cubic feet; of the convalescent ward, 10,000. The number of adult beds is 11 for the acute

and 4 for the convalescent ward; but in the case of children 20 cribs are allowed.

All the flooring of the wards is of Dantzic oak waxed. The vestibule and annexe are laid with tiles. The walls are coated with Keene's cement. Some wards are oil painted and varnished, but the more recent are treated with light blue or green distemper, which can be frequently renewed. All the woodwork is varnished. Care is taken to avoid flat surfaces giving lodgment for dust. The principal rafters are, therefore, of light T iron, and the ties of thin rod iron.

The heating is by hot water circulating in pipes which are led round the walls above the floor. This is derived from two hot water tanks heated by steam, and placed beneath the entrance hall of each ward, to which access is obtained from the outside by a stair leading to the basement. There are also open fires at either end of each ward. Pavilions with numerous windows and open to the roof are very difficult to warm sufficiently during winter. Experience at Parliamentary Road soon showed that it would be necessary to check radiation by the large glass area, and accordingly the device of double glazing each pane with an interval of three-quarters of an inch of air space was adopted. The wards at Belvidere are kept at 55° to 60° in the coldest weather. There are heating coils in the vestibule and bath room.

Fresh air is admitted by direct openings beneath the windows, which are numerous, so that it passes over the heating pipes. These openings are controlled by an arrangement which admits of gradation and cannot be interfered with except by the nurse. There are skylights on opposite sides of the slope of the roof, Boyle's ventilators fixed on the ridge, and ventilating shafts alongside the chimneys, with

openings controlled by moveable louvres at the apex of the roof.

The principles kept in view in furnishing are simplicity, smooth surfaces, and facility of removal and cleaning. The bedsteads are wrought iron, the tables and chairs hardwood varnished. In children's wards, iron cribs are provided, and pigmy forms and tables suited to their size. All cupboards, presses, &c., are moveable on iron rollers like American trunks. The mattresses are stuffed with straw, the pillows with chaff. They are renewed for every new patient and whenever soiled. Wood wool was recently tried as a substitute for straw, but was found speedily to break down, and, on account of the consequent expense and larger quantity and more frequent renewal, was not adopted.

The nurses are graded in three classes—probationers, nurses, and head nurses. After a year's probation, during which she attends lectures on Fever Nursing given by the assistant physicians, the probationer is submitted to a written and *viva voce* examination. If she passes satisfactorily, she gets a "Certificate of Proficiency in Fever Nursing," first, second, or third class, signed by the physician superintendent, and becomes a nurse. The wage of a probationer is £18, and advances gradually to £30, all getting two uniform suits per annum for ward use alone. To work a purely pavilion hospital such as Belvidere, all its parts distributed over a large area, and to maintain the large extent of flower garden and pleasure ground attached, requires a large staff. The distribution of coals is done by an open lorry, on which all the coal boxes are placed and driven round the wards. The food is distributed by a covered van, divided into compartments, each of which holds the allowance for a ward. The ashes are collected daily from portable circular covered ashbins countersunk in the ground adjacent to each ward,

an arrangement which combines convenience and perfect sightliness and inoffensiveness. The whole institution is under the care of a physician superintendent, who is assisted in the general business of the hospital by a house steward, and in the medical charge by two permanent medical assistants. These are supplemented, as occasion requires, by extra assistants. In fact, there are seldom less than three assistants, and usually in the autumn and winter there are four or five. These appointments are in great request among the best students of the Glasgow school. They are only given to qualified men, and by preference to such as have been house surgeons in either of our Infirmaries. They remain from one to two years. The present physician superintendent, Dr. J. W. Allan, was appointed in August, 1875, and has contributed much by his urbanity, good management, and rich experience to win and to retain the confidence which Belvidere undoubtedly possesses both with the profession and the public.

In calculating the cost of treatment, the expenditure on the Small-Pox Hospital is always thrown in with that on the Fever Hospital. There having been only rare and isolated cases of small-pox for some years, 120 beds have been constantly used for scarlet fever, and only one pavilion, barricaded off with the whole administrative buildings, for small-pox. A small staff is maintained there. The last financial year for which the accounts are made up (1st June, 1886, to 31st May, 1887) may be taken as an illustration of the expenditure, number and nature of cases treated, &c. There was not a single case of small-pox treated, but £558 were expended in the Small-Pox Hospital; £15,945 in the Fever Hospital; 2,790 cases were treated, including 1,270 cases of scarlet fever, 504 of measles, 204 of enteric fever, 176 of hooping-cough, 87 of typhus, 134 of erysipelas, diph-

theria, chicken-pox, and puerperal fever; the balance being made up of nursing mothers and cases of mistaken diagnosis. The average residence over all was 43·3 days (which is high, owing to the regulation residence being 8 weeks for scarlet fever); the average daily number of patients, 332: the average cost of treatment per patient, £5, 18s. This does not include interest on capital expended in building and furnishing hospitals, but does include ground annual and all current expenditure in maintaining the whole estate and working the hospitals. Taking one year with another, the average mortality is: For typhus, 13 per cent; enteric fever, 12 per cent; scarlet fever, 12 per cent; measles, 5 per cent; hooping-cough, 12 per cent; and over all cases, 10 per cent.

In the N.E. corner of Belvidere estate, the central washing and disinfecting establishment for the city is situated, occupying an area of 2,500 square yards. In those times when the treatment of infectious diseases was left to the Royal Infirmary, whatever disinfection was carried out at the houses of the patients was also performed by the Directors. In their Annual Report for 1824 they refer to this fact. The first washing house established by the authorities was a small place with a few tubs in a close off the High Street. This was opened in 1864. When Belvidere was acquired, half of the existing Fever Hospital washing house was reserved for this purpose. This soon proved inadequate, and the present separate establishment was finished, in 1883, at a cost of £8,400. It is essentially a washing house, fitted up with the best mechanical appliances, to which the articles to be treated are driven by a service of vans. There is a Lyon's disinfector, in which mattresses, clothing, &c., which cannot be washed, are disinfected, a cremator for burning straw, chaff, wool, flock, and other articles, "whose end is to be burned," and a carpet-beating machine.

It has just been resolved to spend £800 in improving the arrangements, and especially in adding appliances, devised by the Sanitary Inspector, for treating everything which is ultimately to be washed with a solution of bichloride of mercury, which, it is expected, will make the articles innocuous before passing them on to the washers. On an average, 1,000 articles per day are treated in one way or another. The hospitals, the washing house, and the Sanitary Office in the city are all in telephonic connection.

All has not been told that it is of importance to know regarding the preventive treatment of infectious disease when the material equipment, the hospitals, washing houses, disinfecting apparatus, &c., of a Local Authority have been described. The question still remains—How are they used; on what terms are the constituency admitted to their benefits? So soon as the authorities of Glasgow wakened up to their own responsibilities, and relieved the charitable resources of the Royal Infirmary of the burden of providing hospital accommodation for the community, they recognised that, so long as the Infirmary received infectious diseases from the suburbs, other Local Authorities were permitted to shirk their statutory obligations. Not only conterminous Sanitary Authorities, but all the parishes and burghs for many miles around, exported their infectious diseases into Glasgow. It became, therefore, a fixed policy to oppose and protest against this system. Gradually the Directors of the Infirmary cut off this assistance, and the landward authorities were compelled to appeal to the Local Authority of Glasgow for aid. This was granted provisionally, on condition that active measures were meanwhile adopted to carry out the intention of the legislature that every district should provide for itself. In this way a wholesome stimulus was applied, the influence of which is now manifest in the

erection of hospitals, &c., not only round the city but in distant parts of the neighbouring counties. Within the municipality, the benefits of the whole hospital and disinfecting appliances are open to the inhabitants without charge special to the occasion. The advantages of this position have been worked out from experience. Every form of charge incidental to the existence of infectious disease has been found to be a hindrance to the frank and prompt appeal for, or acceptance of, assistance which the greatest good of the public requires. The last exception to the free system was the case of paupers, the cost of whose treatment was charged to the parishes. This also was given up in 1882, since which date every case of infectious disease within the area of the municipal rates, absolutely without social distinction, has been dealt with at the cost of the rates. Patients are removed from our poorhouses as well as from our west end mansions and disinfection carried out without charge. The result has been a harmony, uniformity, and completeness in the preventive treatment of infectious disease which has satisfied everybody of the correctness of the policy pursued.

In withdrawing from general hospitals, which are the recognised centres for the clinical instruction of medical schools, the whole treatment of infectious diseases, Local Authorities seriously impair the scope of the teaching for which, under the old method, those hospitals afforded ample and convenient opportunity. Recent discussions in the General Medical Council have directed forcible and just attention to this matter. There can be no doubt that it is directly in the interests of prevention of epidemic disease, which is the prime object of the function of Local Authorities, that the clinical material which now is to be found only in their hands should, as far as possible, still be made

available for teaching purposes. The Local Authority of Glasgow have never lost sight of this part of their duty. There are three ways in which they have endeavoured to make their hospitals serviceable in this regard:—(1) By training a select number of young medical men as Assistants into special skill in the diagnosis and treatment of infectious diseases. (2) By carefully instructing nurses in the management of patients suffering from these diseases. In addition to the ordinary members of the nursing staff, by special arrangement with the Glasgow Sick Poor and Private Nursing Association, a limited number of women are received, after passing through a general hospital, for a year's instruction at Belvidere. (3) The wards are open, without charge, for clinical instruction, to all the Professors and Lecturers in the Medical Schools of Glasgow. By arrangement with the Superintendent those gentlemen take their students in detachments round the wards as often as they wish during the session, demonstrating the rashes and diagnostic points of the different diseases. These opportunities are largely taken advantage of. In addition, since 1884, Dr. Allan has constituted a special class, which he conducts during the summer. The distance of the Hospital has, probably, along with the multifarious demands now made upon the time of medical students, prevented the attendance from being so large as might be expected. It is to be hoped, however, that the unique advantages of Belvidere as a clinical field, and the extension of underground and suburban railway communication, will gradually develop this useful clinique. But the duty as well as the interest of the Local Authority extends further than mere benevolent neutrality towards, or passive tolerance of, teaching and research in reference to infectious disease. General hospitals now equip more or less liberally, and maintain,

pathological departments, recognising the indirect relation to cure of the scientific investigation of disease. Infectious disease has been withdrawn from the sphere of this scientific investigation; and it behoves the Local Authority not merely to permit, but to promote and support every kind of enquiry which will extend our knowledge of the etiology, pathology, and treatment of the diseases for the treatment of which they are responsible. I am not without hope that, when the expenditure still proceeding at Belvidere to perfect the hospital proper has ceased, the Glasgow authorities will favourably consider the equipment of a pathological laboratory fitted up with apparatus for chemical investigations, and supplied with all the means for cultivating, staining, and examining micro-organisms.

J. B. R.

N.B.—A Block-Plan of the Fever and Small-pox Hospitals, with Elevation and Sections of a Pavilion, have been specially prepared by the Master of Works, and photo-lithographed at the cost of the Local Authority, to accompany this paper.

JOINT HOSPITAL.

KNIGHTSWOOD.

This hospital, for the treatment of cases of infectious disease in the burghs of Maryhill, Hillhead, and Partick (with a population of over 55,000 altogether) was opened in 1877. There are two pavilions with wards for the different fevers, and in 1887 a new pavilion, quite isolated from the others, was provided in the grounds for cases of small-pox. Inclusive of this, the hospital can accommodate about 100 patients, and the average number of cases admitted annually is about 160, including patients from landward parishes admitted under

special arrangements with the hospital authorities. Cases are admitted free from the burghs from which the rates, which support the hospital, are drawn; and patients are sent for on notice being given to the authorities. There is a resident medical superintendent, and the matron has under her four to six nurses, according to requirements at different times. The board of directors is chosen from the Commissioners of the three burghs.

C. F. P.

COMBINATION FEVER HOSPITAL.

GOVAN.

This hospital for infectious cases was opened in 1883, and is provided with 50 beds. The population from which the patients are drawn numbers about 70,000, and includes the burghs of Govan and Kinning Park and portions of the Govan parochial district. As it is maintained by the rates, admission is free, and patients are sent for whenever notice is given to the authorities. The average number treated annually has been about 140, but this is rapidly increasing. There is a resident medical superintendent; and five nurses are under the matron's direction.

C. F. P.

THE GLASGOW LYING-IN HOSPITAL.

A Hospital for Lying-In Women was opened in Glasgow about the year 1792; but, for some reason, it was interdicted by the Magistrates immediately after being opened. No further attempt was made till the year 1834, when, at a

meeting held in the Town Hall, it was resolved "That, in consequence of the great and rapidly-increasing population of Glasgow and its suburbs, a public lying-in hospital has been long a desideratum in this city, for affording the necessary accommodation and assistance to indigent married females, under circumstances which are at all times attended with suffering, and frequently with danger, and where the want of such accommodation and assistance has often proved fatal to the mother, to her offspring, or to both. That such an institution is also wanted for the purpose of affording to students of medicine the means of practical improvement in this important department of their profession, and for placing the Glasgow Schools of Medicine upon a footing with those in the other parts of the Empire." That the directors of this new hospital had in view the abuse of medical charities is obvious from the following, taken from the rules for the new institution:— "That this institution may not in any degree lead to the encouragement of improvidence, none shall be admitted but those who are married and are really destitute, being unable to pay for medical attendance, and otherwise proper objects to be admitted to the benefit of this asylum. These conditions shall be expressly vouched in the printed forms that shall be issued for the recommending of patients." "To poor women who may wish to be attended in delivery at their own houses, that attendance shall be furnished to them upon leaving their addresses at the hospital, along with a certificate from an elder, district surgeon, or other respectable person cognisant of the case, stating that the applicant is unable to pay for medical attendance." In order that "rigid propriety and decorum" might be observed, not more than four pupils were to be present at any ordinary case; whilst, to prevent the Faculty of Physicians

and Surgeons having too much control over the hospital, one of the medical directors must be "not a member of the Faculty." A modest beginning was made by the acceptance on the part of the directors of the following offer:—

"Glasgow, *31st October, 1834.*

"Mr. John Alston,—Sir,—The second flat and garrets of the old Grammar School, in the Grammar School Wynd, belonging to the heirs of the late James Rea—the garrets to be divided in the way pointed out to the Committee—you can have for the Lying-In Hospital from Whitsunday, 1835, till Whitsunday, 1836, at Thirty Pounds a year. The garrets and that part of the second flat, except the present schoolroom, you can have when finished at the same proportion of rent till Whitsunday, 1835."

The first appointment as ordinary accoucheur, or medical superintendent, was conferred on Dr. James Wilson, father of the late Dr. J. G. Wilson, who was afterwards Professor of Midwifery in Anderson's College. The former died in 1857; the latter was on the staff of the hospital from 1855 till 1881—these gentlemen having thus been connected with the institution for nearly fifty years.

The Hospital was opened on the 10th of December, 1834. The first patient was admitted on the 15th of the same month; but the first confinement did not take place till one month after. The first year's experience was not a happy one. The Report states that "one child died soon after its birth of erysipelas. There were two deaths of the mothers, both from inflammatory attacks incidental to the puerperal state. The disease itself was understood to be an epidemic, prevailing to a certain degree at that time in the city and suburbs. The domestic servant of the Hospital suffered from

a similar attack, and also died, and the matron, from fatigue, alarm, and actual indisposition, was unable to discharge the duties of her office. The medical attendants, in these circumstances, after due deliberation, resolved to shut up the hospital till it could be thoroughly cleansed and fumigated." They thought also that it was "on many accounts advisable to manage this untoward and alarming event with as little public notice and discussion as possible."

Not only had the staff at this early period of the history of the Hospital to contend with difficulties inside the institution, but the great moral question as to the possible encouragement of vice by the admission of unmarried women had to be faced at the very outset. It was only, however, in the Twenty-Fifth Annual Report that the Directors had the courage to announce that the Hospital was for "poor and homeless lying-in women." The *rule* at the opening of the Hospital was a stringent one. None were to be admitted but those who were married. This is still the practice in many of the lying-in hospitals of London, and materially diminishes their death-rate, whereas, in the Glasgow Maternity, unmarried women have been always admitted. True, at first they were only admitted as cases of emergency, the medical staff, to their credit be it said, not having sufficient "inhumanity to the unfortunate," as they put it, to refuse. Two lives, they said, were imperilled, one of which at least was an innocent one. They promised, however, in "ordinary cases" not to go in "direct opposition to the moral views of the contributors who disown giving their aid to an institution which tends in any degree to encourage vice and dissipation." The contributors had not yet learned to act on Hamlet's advice to Polonius regarding the players—"Use them after your own honour and dignity: the less they deserve the more merit there is in your bounty. Take them in."

The medical staff of the Hospital at this time (1835) consisted of two consulting physicians, two visiting physicians, and four out-door physicians. One of our best known Glasgow physicians, the late Dr. J. G. Fleming, was appointed one of the out-door physicians, in 1836, after two unsuccessful applications for this office. Dr. Fleming served the Hospital for many years afterwards, for some time having been consulting surgeon and finally a director, being of the greatest service to it, and taking a warm interest in its affairs till his death.

The history of the institution during its early years reveals an almost uninterrupted struggle against outbreaks of disease in the Hospital, and the want of funds to carry on the work. Repeatedly had the house to be shut "for cleansing"; and so low were the funds at one time that the landlord had to agree to accept of only twenty pounds of annual rent. Finally, even this rent could not be paid; a cheaper house was taken in St. Andrew's Square, ten of the beds were to be offered for sale, and the most "rigid economy" was to be enforced. More trials, however, followed; reflections were cast on the management, and an opposition lying-in hospital was threatened. But at that time (1843-4), when everything seemed against them, matters began to mend. The number of students increased, clinical lectures were commenced, the finances improved, a great increase took place in the number of cases, the Hospital became healthier, and a new and larger house was taken in "an adjoining land." The previous house is stated to have had "only one moderately sized room for the accommodation of patients of all states and stages," and yet 176 women were confined in this "hospital" during the year 1843-4.

That the new house was not looked on as more than a

temporary home for the institution is evident, for no sooner had they become settled in it than a building fund was spoken of, and the sum of £17 was given to start with. In 1851 this fund had reached the respectable sum of £500, and a committee was appointed for the purpose of looking out for a building suitable for the institution. That this was necessary the still frequent closing of the hospital, on account of the outbreak of disease, testified.

It is interesting, in connection with the frequent appearance of disease amongst the inmates, to note how seldom the forceps were used about this time. During the two years preceding November, 1857, 688 women were confined in the Hospital, and in all these labours the forceps were used only *three* times. Compare this with the two years preceding November, 1887, in the present hospital, when 736 women were confined, and 115 of these were forceps cases. That this divergence of treatment must be attributable not simply to a growing confidence in the value of timely instrumental help in labour, is evident from the fact that amongst the former cases in no instance was craniotomy necessary, whereas amongst the latter this operation had to be performed no less than eleven times. An interesting question arises out of this last mentioned fact. Are abnormal labours more frequent now, or is the credit of our present Hospital so great that serious cases are naturally drawn to it? Probably both of these causes operate in bringing about such contrasts.

In 1856 the annual report states that twice during the year the hospital had to be closed on account of "malignant puerperal fever." During part of the year every one admitted was seized with fever, and an urgent demand was made for a new hospital. This demand the funds of the hospital at the time were able to meet; but it was not till January,

1860, that the old house on the site of the present building —at the corner of North Portland Street and Rottenrow— was purchased as a new hospital. Many alterations were made in the building so as to fit it for a lying-in hospital, and, *compared with the previous house in St. Andrew's Square,* the directors were justified in congratulating themselves in "having reared a hospital quite adequate to the requirements of the city." There were 21 beds, but the average space per patient was only 230 cubic feet. It cannot, therefore, be matter for surprise that, although for two years the health of the inmates was good and the death-rate reduced, septic disease soon after prevailed, the death-rate increased, and in the autumn of 1863 the hospital had to be closed for three weeks. Dry rot was discovered and removed, and the Hospital thoroughly cleansed, and for some time no death nor protracted recovery occurred. The satisfactory state of the Hospital soon induced the directors to begin a dispensary for diseases of women. This venture was eminently successful; but it became apparent, after a few years, that the accommodation was inadequate for the double purpose, and the dispensary had to be given up.

The Hospital continued for years to give great satisfaction. In 1872, out of 323 in-door cases only one patient died; but in the following year, out of 312 in-door cases, eight patients died, three of these at least from septic disease, and the Hospital had to be closed and fumigated.

The out-door work of the Hospital had always been an important one, and the number of women attended at their own homes had increased at this time to nearly one thousand.

About this time dissatisfaction with the building was being felt by the Medical staff and by the Directors. During one year the Hospital had to be closed three times: perforations were afterwards discovered in the sewer pipes,

and it was felt that the house was "done," and a new building required. After much deliberation it was decided to take down the old house and build a suitable Hospital on the same site. During the building operations, the patients were accommodated in the Parliamentary Road old Fever Hospital, and this proved a most satisfactory arrangement.

The present building, which has cost nearly £8,000, was begun in November, 1879, and opened in January, 1881. Mr. Robert Baldie was the architect, and he gave effect in his plans to all the latest improvements which were suggested to him by the hospital physicians, by those in charge of other similar institutions, and by Dr. J. B. Russell, the medical officer for the city.

The following description of the New Hospital is taken from an account of it published at the time of its opening :—

"The style of architecture adopted is Early English Domestic Gothic. The sky line is agreeably broken up by stone dormers rising above the parapet. The principal entrance is from North Portland Street by a Gothic arched doorway, with pediment, having the Glasgow coat-of-arms and the dates when the Hospital was founded and rebuilt. Towards the Rottenrow the building rises to a height of three storeys and attics. At the north end of Portland Street the height is the same, a lower storey being brought in, as the street falls to the south. The external walls are all of stone, two feet thick, faced with square dressed rubble masonry, and finished at the top with a solid stone parapet. The outbuildings are commodious and complete. Entrance to them is obtained by a large gateway under the south end of the Portland Street front of the main building, which leads into a courtyard paved with asphalte. The out-buildings, which are ranged along the west side of this yard, consist of laundry, washing house, disinfecting room,

and *post-mortem* room. These are entirely detached from the Hospital. The floors of the offices are paved with Val-de-Travers asphalte. On the level of the courtyard is the lower storey of the main building, which is to be used as a lecture room for students. Although the principal entrance to the lecture room is by the gateway already mentioned, there is also internal communication with the Hospital. Entering by the principal door, and going up a few steps, an inner door, nicely fitted up with simple coloured glass, is reached. It opens on a small well lighted hall, with the staircase in front, and broad lobbies running south and west. Opening on the south lobby, on the left, are the matron's parlour and bedroom, and the resident house-surgeon's room, with bedroom and bath room and small dispensary attached. Opening off the lobby leading west are the board room, and the reception room, fitted up with a bath. A doorway at the end of the passage opens upon a small cross lobby, leading into the kitchen, scullery, store room, &c., and also giving access to the courtyard, thus enabling servants to pass from the kitchen to the offices without entering the main lobby. Proceeding up the main staircase, it is found that each of the first and second floors are occupied by the wards for patients, a confinement room and a nurse's room. The wards, which have 13 feet ceiling, give accommodation for 18 patients on each floor, allowing about 1,500 cubic feet of space for each patient. Sanatorium, and bedrooms for pupils, nurses, and servants occupy the upper floor. Access to the various floors is by a large open stone stair of short flights, and square landings of easy ascent, well lighted and ventilated, with windows on two sides. Access from the stair to the various wards is by wide corridors, branching to the right and left of the main staircase. The lavatories for the several floors are placed in a wing behind, and are

entirely disconnected from the main building, having a well lighted and ventilated lobby between them and the hospital, cut off by double doors. The walls of the lavatories are finished with white enamelled brick. The fittings of the lavatories consist of hot and cold spray and plunge bath, &c. To prevent danger from sewage gas in any part of the Hospital, the whole of the syphon traps are ventilated and carried above the roof. There are no water closets within the main building, and all the baths and sinks within it discharge into an open grating before reaching the drain pipe. From the elevated situation of the buildings the sewage has a quick discharge into the street sewer, but to prevent the return of sewage gas the main pipe is fitted with a patent trap, which is charged with animal charcoal and ventilated with a pipe carried up to the ridge. The interior furnishings of the building are plain and substantial. The wood work is of yellow pine, stained and varnished; the walls of the wards are all finished in plaster on brickwork, no lath or strapping being used; and the floors are all pitch pine, in narrow breadths, stained and varnished. To aid ventilation, the upper part of the windows is hinged to fold inwards, and over the doors to all the wards there are hinged fanlights. The heating is by open fireplaces and low pressure hot water pipes carried through all the wards and round the lecture room, and there is also a coil enclosed in a case in the staircase. The fresh air, which is admitted by openings fitted with valves at the level of the floors, is warmed by coming in contact with the hot water pipes before admission to the wards. The vitiated air is carried off by openings fitted with valves in the corners of the wards, immediately under the ceiling, which are connected by separate flues with a hot air extracting chamber, formed in connection with the chimney from the boiler of the heating apparatus. The air of the chamber is

rarefied by heat from the boiler, being carried up in an iron flue inside the chimney stalk, with an air space all round. The coil of hot water pipes is so arranged that it can be used separately for summer ventilation when the other parts of the apparatus may not be required."

Each of the floors, in which are the wards, is provided with a separate confinement room and a nurse's room. The object of this arrangement is to permit of only one series of rooms being occupied at a time, the other series being meantime cleaned, aired, and fumigated. This fumigation is done by burning sulphur, which is also the agent used in the disinfecting room. Antiseptics are regularly and extensively used in the Hospital, and the strictest cleanliness on the part of the whole of the nursing and medical staff is enforced.

The present medical staff consists of a consulting surgeon, a senior consulting physician, a consulting physician, two obstetric physicians, two assistant obstetric physicians, two pathologists, two resident house-surgeons, and seven out-door or district physicians. With the exception of the resident house-surgeons, who are elected quarterly, all the medical officers are elected annually, the obstetric physicians being ineligible for one year after having served for eight years, and the assistant obstetric physicians after having been in office four years.

The number of confinements during the past year amounted to over 2,000—367 in-door, and 1,639 out-door—and the nature and importance of the work may be understood by a reference to the last Annual Report. Here it will be found that for the 2,006 cases, the forceps were required 149 times, which gives (when the 19 cases of miscarriage are deducted), 16·8 per cent for the in-door, and 5·4 per cent for the out-door cases. Craniotomy was performed 5 times in-door and 3 times out-door; giving a percentage for the in-door

cases of 1·38, and for the out-door cases 0·184. Version was 3 times performed inside the Hospital, and 13 times in the out-door department, whilst premature labour required to be induced in 3 of the in-door cases. It is evident, therefore, that in great part, the serious cases gravitate to the in-door department; some of these are moribund on admission, and these deaths are included amongst the maternal deaths occurring in the Hospital. Under these circumstances a mortality of rather under 2·32 per cent, which is the average since the opening of the present building, cannot be considered a high one.

It may be mentioned also, that at no time during these seven years has it been found necessary to close the Hospital; whilst it is stated in the last Annual Report, that "No woman died in the Hospital during the year who could be said to be in a fair state of health when she entered it."

Several cases of Cæsarian section have occurred in the Hospital. One such operation was successfully performed during the spring of this year. The mother and child are still alive and well.

Having thus far considered the work done in the Glasgow Lying-in Hospital in the department of obstetrical practice, something may now be said on the important subject of obstetrical teaching as it is carried on at present in this Hospital, which is the only school of practical obstetrics in the West of Scotland. The teaching is divided into two branches—viz., for nurses and for students.

Before detailing the arrangements for teaching students, it may be mentioned that from 30 to 40 women are annually trained in this Hospital as ladies' nurses and midwives. A woman entering the Hospital for this purpose has to pay a fee of 5 guineas, with 8s. per week for board. She is taken on trial for one month, when, if found suitable, she com-

pletes her three months' residence in the Hospital, and must then pass an examination, obtaining her diploma if successful. Three lectures by the physicians are delivered to the nurses during each week; but their practical training is largely in the hands of the matron, who is herself possessed of a midwifery diploma. Each nurse must have attended at least thirty cases of labour, partly in-door and partly out-door, during her residence.

About 130 students join the Hospital annually. In order to supply each student with six cases, if possible, during the fortnight in which he resides near the Hospital, the matron is expected to arrange with the student, on entering, the time for taking out his cases. Before being permitted to attend out-door cases, all students are required either—(1) to produce a certificate from a Lecturer on Midwifery, whose lectures are recognised by a university or other licensing body, of their having diligently attended a systematic course of at least forty lectures on midwifery, and stating that the lecturer has examined them, and that they are, in his opinion, qualified to attend cases; or (2) to produce a certificate from one of the Physicians of the Hospital of their having attended the course of lectures given at the Hospital, and stating that the physician has examined them, and that they are, in his opinion, qualified to attend cases; or (3) to produce, in the event of their not having attended one such course of lectures, a certificate that they have undergone an examination on the anatomy of the female pelvis and of the fœtal head, the signs of pregnancy, and the phenomena and management of natural labour, before such a Lecturer on Midwifery, or before either of the Physicians of the Hospital, and that at such examination they had acquitted themselves to the satisfaction of the examiner, and that they are, in his opinion, qualified to attend cases. The students are, however,

urged to attend, whenever it is possible, a complete theoretical course of instruction in Midwifery prior to joining the Hospital.

No student is allowed to attend a case on his own account till he has been present at three cases with the out-door house-surgeon—a fully qualified medical man—whose duties are to give him practical instruction at these cases. Should any abnormal condition occur during the course of labour at his future cases, or should there be any complication during the puerperium, the student is instructed to send at once for the out-door house-surgeon, or for one of the district physicians. He is also expected to attend at the Hospital three days a week at the visiting hour of the physician on duty, during the months of May, June, and July, to receive practical and clinical instruction. Though he may see ordinary cases of labour in the Hospital, and is expected to be present at abnormal in-door labours, all the cases he attends are in the out-door department. Every case attended out-door, whether by nurse or student, is visited, during convalescence, at least once by the out-door house surgeon, who keeps a record of these visits for the physician's inspection.

By arrangement with the matron, qualified medical men can have the opportunity of gaining additional experience in obstetrics without fee, by taking cases in connection with the out-door department.

The directors have recently opened a West End Branch at 491 St. Vincent Street. Patients are not received into the West End house, but are attended from it, free of payment, at their own homes. Students will continue to take their first six cases from the Hospital in North Portland Street; but will have an opportunity of taking additional cases from the branch.

The Hospital is managed by a board of 27 directors, 10 of whom are annually chosen by qualified contributors, the remainder being representatives from the various public bodies. The institution is, with the exception of fees from nurses and students, entirely supported by voluntary contributions—annual subscriptions, life subscriptions, and legacies.

S. S.

THE GLASGOW EYE INFIRMARY.

170 BERKELEY STREET.

THE Glasgow Eye Infirmary was founded in 1824 by Drs. Monteath and M'Kenzie, but the success of the institution, which was commenced on a very small scale in North Albion Street, near the old University in High Street, is due, in great measure, to the professional ability of Dr. William M'Kenzie, whose name is so closely associated with ophthalmology that a brief sketch of his career may be given.

In 1815, after obtaining the diploma of the Faculty of Physicians and Surgeons of Glasgow, Dr. M'Kenzie proceeded to London, and afterwards to the Continent, where he remained till the beginning of 1818. While still a student, he seems to have had his attention specially directed to the anatomy and physiology of the eye, and his interest in the practical department of ophthalmology was stimulated by the letters of his friend, the late Professor Rainy, who went to London and Paris before him, and who was particularly impressed by the successful eye operations performed by Roux, as well as by the superiority of the French ophthalmologists, especially in the treatment of Egyptian or military ophthalmia, which then and some years after scourged the French and British armies.

The greater part of his sojourn on the Continent was spent in Paris and Vienna, although he visited other medical schools, and spent a short time in making an Italian tour. During his residence in Vienna, where he was a pupil of the celebrated Beer, he devoted himself chiefly to ophthalmology; but he did not confine his attention solely to this subject. While in Paris he devoted a large portion of his time to the study of anatomy, a subject in which he was specially interested, and he did so with the view of ultimately becoming a teacher of anatomy.

On his return to this country, he became a member of the Royal College of Surgeons; and, after failing to come to terms with Sir William Adams in a proposed assistantship, and in securing Brodie's Anatomical theatre, he commenced practice in London as an oculist, "balancing," as he says in his diary, "between anatomy and ophthalmology, I would choose that which I could cultivate with the greatest advantage to my fellow-men." His success in London as a practitioner and lecturer on eye diseases was not encouraging, as we learn that he began his first course of lectures with an audience of *three* and his second with *five*, three of whom became pupils; and, being disappointed in regard to a popular lectureship on anatomy, for which he was an applicant, he left the Metropolis and returned to Glasgow.

In October, 1819, he was elected Professor of Anatomy and Surgery in Anderson's College; and, in 1828, he was appointed Lecturer on the Structure, Functions, and Diseases of the Eye, in the University, an appointment which he held till his death, in 1868. While connected with Anderson's College, he delivered extra-academic lectures on the same subject, and founded the Eye Infirmary.

In 1830 he published the first edition of his great work on *Diseases of the Eye*, which made him famous throughout

Europe. This book was both a cyclopædia of the ophthalmology of that date, and a work full of most valuable original observations, largely drawn from the records of the Infirmary.

On the death of Dr. Monteath, in 1829, Dr. Rainy was appointed as his colleague. Besides being a competent ophthalmologist, Dr. Rainy was an accomplished physicist and chemist; and, in this capacity, afforded important aid to Dr. M'Kenzie, who was not by any means strong on these subjects. It may be interesting to note that the now well known Pagenstecher's ointment (yellow precipitate) was one of the mercurial preparations experimented on by them, but it was given up on account of its instability, the red oxide, which has the same chemical constitution, being adopted, a preparation still in use at the Infirmary.

In 1835 the Infirmary was removed to College Street, and in 1852 the Directors purchased a house in Charlotte Street, formerly the town residence of David Dale, a well known Glasgow merchant. The situation was admirably chosen, being close to the Glasgow Green, a large open space; but, as no material change was made in its internal arrangements, the cubic space and ventilation were not such as could be approved of now, there being thirty beds distributed over four rooms.

When the University was removed to Gilmorehill, the question of reconstruction, or the erection of a new hospital, was brought before the Directors, and it was finally decided to build a new hospital in the western district of the city, it having been previously ascertained that the greater number of the patients came from that district, the site fixed upon being also convenient for students attending the University.

A new Infirmary, adapted for 70 beds, and with all the most advanced modern appliances, was erected in Berkeley Street, at a cost of about £14,000, and was opened in 1874,

the architect being Mr. Burnett, who designed the Western Infirmary. The old hospital in Charlotte Street was retained as a dispensary for the benefit of the inhabitants of the east end and the poorer parts of the city.

During the following ten years there was a great increase in the number of out-door patients in connection with both institutions, and a proportionate increase of in-door patients. The insufficient accommodation and the crowded state of the wards having been brought under the notice of the Directors, two large wards with operating room were added, bringing up the number of available beds to 120.

The large population connected with the numerous industries of the city and surrounding districts supply a large number of patients, so that the clinical material of the Hospital is both great and varied. During last year (1887), 8,449 patients were treated at Berkeley Street and 6,281 at Charlotte Street. Of these, 1,154 were admitted as hospital patients, and 1,591 major and minor operations were performed in the course of the year.

The Infirmary is supported entirely by voluntary contributions, the greater part of the income being obtained from the subscriptions made by those employed in the public works in and around Glasgow. The ordinary income in 1887 was £2,543 and the ordinary expenditure was £2,805. At present those applying for advice and treatment require to be provided with a subscriber's line; but, although this is the rule, no one who is destitute and in need of the benefits of the institution is refused assistance.

The present surgical staff consists of a senior surgeon, three surgeons, and three assistant surgeons. There are also an honorary consulting surgeon and a resident house-surgeon. During the summer months, lectures are delivered at Berkeley Street, by the senior surgeon, and at Charlotte Street by one

of the surgeons. The fee payable by students attending the clinique and lectures during the session is one guinea. The visiting hour, at both dispensaries, is 1 o'clock, and operations are performed, at Berkeley Street, every Wednesday at 2·30, and every Saturday at 2 o'clock. F. F.

GLASGOW OPHTHALMIC INSTITUTION FOR DISEASES AND INJURIES OF THE EYE.

126 WEST REGENT STREET.

This institution was founded in 1869. The present house was acquired in 1872, and has since been twice enlarged. At present it contains 35 beds, an operating theatre, and all necessary accommodation for in and out-door patients, and also the necessary domestic accommodation for the matron, nurses, and servants. There are also the waiting and other rooms required for the dispensary work, which is carried on daily from 1 to 3 P.M.

About 3,700 patients apply for advice and medicine annually, and of these about 460 are admitted into the hospital for treatment.

The visiting staff consists of a consulting physician, a physician, a surgeon, and two assistant surgeons; and a course of instruction for medical students is given during the summer and winter sessions.

The institution is supported by voluntary contributions, which amount to from £1,200 to £1,500 per annum. The house property and funds in possession of the institution amount to about £15,000. It is managed by a board of directors, the consulting physicians and physician and senior surgeon being members of the board of management.

J. R. W.

THE GLASGOW EAR HOSPITAL.

28 ELMBANK CRESCENT.

In 1872, the late Dr. J. Patterson Cassells opened a dispensary designated "The Glasgow Dispensary for Diseases of the Ear," *for the gratuitous treatment of necessitous persons suffering from all forms of Ear Disease and Deafness;* and this dispensary ultimately developed into the "Glasgow Ear Hospital."

The late Dr. D. Patrick was the first practitioner who devoted himself exclusively to the practice of aural surgery in Glasgow, but he does not appear to have been associated with any public dispensary. As a specialist, in aural surgery, he practised from 1845 till 1865. The late Dr. Robert Corbett conducted for two or three years, about 1858-60, a dispensary for Diseases of the Ear.

When the dispensary presided over by Dr. Cassells was opened, there were two similar dispensaries in Glasgow, one being the Ear and Skin Dispensary in John Street, which had existed, in its double capacity, for nine years; but it was soon arranged that the ear department of that dispensary should be closed. The second dispensary was in Montrose Street, and was conducted by the late Dr. D. Dewar till his death in 1873; it having been in existence about nine years.

In 1877, an aural department was opened in the Western Infirmary, and, in 1878, in the Royal Infirmary.

From 1873 the "Glasgow Dispensary for Diseases of the Ear" was the only one in the city solely devoted to the treatment of such diseases; and its success may be indicated by the fact that 2,569 cases, representing 12,845 consultations, were treated during the first eight years of its existence. At this period it was resolved to extend its usefulness by providing twelve beds for the treatment of the more severe cases of ear

disease, and in October, 1880, it was formally opened as a hospital as well as a dispensary. The late Professor Andrew Buchanan presided on the occasion, and gave to the company assembled a demonstration on the Structure and Functions of the Ear, declaring the Hospital open "to those of every tongue and clime, of every faith, and to those who have no faith, provided they are suffering from Ear Disease."

At the death of Dr. Buchanan, the directors recorded their sense of the loss in the following minute:—"The Directors desire to record their sense of the great loss which the Hospital has sustained in the death of their esteemed President, Dr. Andrew Buchanan. They recall with gratitude the fatherly interest which he took from the outset in the Institution, his visits to the Hospital, and inquiries after the welfare of the patients. The diagrams on aural subjects gifted by him to the Hospital, the Directors look upon as a memento of one who, in addition to his distinguished services to the medical profession, brought to bear on the cause of suffering humanity a large and loving heart."

Situated originally in Buchanan Street, the Institution migrated in 1885 to much larger and more convenient premises at 28 Elmbank Crescent, where it is at present situated. The building is very commodious, consisting of three flats and a kitchen area. In one flat there is the large clinical room, where patients are seen by the medical staff, having three windows, yielding, in suitable states of the weather, good natural light, while eight gas brackets, with argand burners, provide for the examination of patients by artificial light, and give facilities for the practical work of the course of instruction. On the same flat there is also a waiting-room and a room for recording cases. On the second flat there is a spacious lecture-room, and a room for the meetings

of the Board of Directors. On a third flat accommodation is provided for in-door patients. A play-room is also provided for the use of children. Besides being commodious, the Institution is excellently equipped with diagrams, models, instruments, &c.

The dispensary department, for admission to which a subscriber's line is not required, is open daily at two o'clock. In this department there were seen during the year ending 29th February last, 846 patients, representing 4,910 consultations. The in-door department is a very important feature of this institution. During the past year there were 57 admissions to this department. In-door patients are admitted on the recommendation of subscribers of £1, 1s. annually. The members of the medical staff have also the power of transferring suitable cases from the out-door to the in-door department. The in-door patients consist of persons who suffer either from the more serious consequences of purulent disease of the ear, or from the more simple forms of deafness, when, owing to the destitute condition of the patients, there is no chance of the treatment being carried out satisfactorily at home.

It may be interesting to mention that about eighteen months ago there occurred, in the in-door department, one of the few cases in which the skull has been successfully perforated in order to reach and drain a cerebral abscess consequent upon ear disease. The patient (a boy) is now alive and well.

The Board of Management is composed of fourteen gentlemen, presided over by Chas. M. King, Esq., of Antermony. The medical staff consists of the aural surgeon and two medical men who act as clinical assistants, while two medical students are appointed every six months to perform the duties of clinical clerks. There are, in addition, a consult-

ing physician and surgeon, consulting ophthalmic, throat, and dental surgeons, and a pathologist.

Regular courses of lectures and clinical instruction are conducted by the aural surgeon. The importance of this section of the work will be best indicated by pointing out the results of the winter session 1887-88. During that session the course was attended by as many as 75 students. This was the largest class ever conducted in the Hospital. In addition to the regular courses of instruction, students and practitioners frequently attend to see the practice of the institution, and are always welcomed by the members of the medical staff. It is not over the mark to say that, during the past year, 100 medical students and practitioners came under the influence of the teaching function of this institution.

It only remains to be added that the financial condition of the Hospital is satisfactory. The income last year (including subscriptions, donations from patients, and legacies) was £425, 18s. 8d., while the expenditure amounted to only £343, 18s. 6d.

T. B.

THE GLASGOW LOCK HOSPITAL.

41 ROTTENROW.

The Lock Hospital was formed in 1805 for the treatment of unfortunate females, and was incorporated by "Seal of Cause" from the Magistrates and Town Council in 1807. It was started with 11 beds in a house in Rottenrow farther west than where it is now situated, and the number of beds was increased to 20 in 1810. A new site was acquired, and the present building opened in 1846. This has 7 wards with 45 beds, but there is sufficient room to accommodate 80 beds

if required; and all necessary household, surgery, and bath accommodation is provided.

The staff consists of two surgeons, one or other of whom visits two or three times weekly; and a clinical clerk, who is generally a senior student, but sometimes a qualified practitioner, is in attendance daily. Students are admitted for instruction. The superintendent, the matron, and a nurse reside in the house.

Up till 1855 applicants for admission had to procure a subscriber's line, but since that date no such formality has been required, any one applying at the door being freely admitted. The average number of cases admitted annually for the last five years has been 330, of whom 220 applied for the first time, many of them being very young girls; and the average number of patients nightly in the hospital has been 28. Each patient spends on an average 29 nights in the house, and the average cost per patient is £2, 1s. 7d.

The institution is supported by voluntary contributions, and receives annual grants from the City, the Barony, and the Govan Combination parochial authorities, and occasional fees from special cases are received.

C. F. P.

Lunatic Asylums.

GLASGOW ROYAL ASYLUM.

GARTNAVEL.

Scotland is singularly fortunate in the provision it has made for the care and treatment of the insane. The *pauper* insane who require asylum care are all accommodated in rate-provided asylums, where no profit requires to be made out of their maintenance; while of the *private* patients who require asylum care about 90 per cent are accommodated in the Royal Asylums, where no proprietary interests exist, and where the thought of a dividend never hampers the administration. These Royal Asylums of Scotland are seven in number, and are conveniently distributed throughout the country at Aberdeen, Dundee, Montrose, Perth, Edinburgh, Glasgow, and Dumfries. They are all public institutions in the sense that they are the property of the public, by whom their directors are appointed, and that they exist for the public benefit, no individual deriving any direct profit from their revenues; but they are private institutions in respect of the privacy the patients enjoy, and in respect that they derive no support whatever from Government or from public funds, but depend entirely on the

GLASGOW ROYAL ASYLUM, GARTNAVEL.

boards paid for patients. At their foundation and in their early history they of course depended largely on private benevolence, but this source of income is no longer required, as they are now self-supporting. They correspond somewhat to the Lunatic Hospitals of England, but they seem to do more for the lower middle class, and to aim rather at being useful to the masses than at becoming luxurious homes for the few.

The Glasgow Royal Asylum may be taken as a type of these Scotch institutions, and its history resembles more or less that of the others. The records show that this institution owes its origin to the philanthropic exertions of one gentleman — Robert M'Nair, Esq. of Belvidere, Glasgow,—who was latterly for many years collector of H.M. Customs at Leith. While acting as a director of the Town's Poorhouse, the heart of this good man was touched by the wretched condition of the insane folk, who at the beginning of the century, whatever their social position, were kept in "the cells" at the Poorhouse on the banks of the Clyde; and, as improvement of the cells was impossible, he determined to procure for them better care and treatment elsewhere. After years of personal solicitation he collected £7,000. The foundation-stone of a "Glasgow Asylum for Lunatics" was laid in 1810, and in 1814, ten years after Mr. M'Nair began his benevolent labours, the institution was formally opened by the Lord Provost and Magistrates of the city. The directors consisted, and consist still, of 14 representatives from various public bodies in the city, 8 from the general subscribers, and the physician superintendent of the Asylum. They were formally incorporated by the city authorities, and their incorporation, thus constituted, was, ten years later, confirmed and established by Royal Charter under the

title of "The Glasgow Royal Asylum for Lunatics." The institution thus established was for many years regarded as a model asylum, and enjoyed the highest reputation. In course of time it became quite unequal, notwithstanding repeated enlargements, to the demands made upon its accommodation, and the extension of the city around it interfered with the privacy and amenity of the institution.

In 1841 the need for more and better accommodation had become urgent, a new site three miles from the centre of the city was selected, the original buildings were disposed of to the directors of the Town's Hospital, and the present Royal Asylum at Gartnavel, in the western suburbs of Glasgow, was opened in 1843. The institution is built in the Tudor Gothic style, and stands in a lofty position in the centre of its pleasure grounds, which, with gardens, extend to 66 acres. It consists of two separate houses, for the higher and the lower class of patients respectively, with all the needful administrative buildings. The plans were prepared by Mr. Charles Wilson, architect, under the direction of Dr. Hutcheson, then physician superintendent, with whom the architect had visited, by desire of the directors, all the best institutions of the kind in England and France. The construction is more institutional and concentrated than would be adopted now, but it was greatly in advance of the time when it was erected nearly fifty years ago, and even now will bear comparison with many more modern asylums. It accommodates 500 patients, at boards varying from the pauper rate to £400 a year or upwards, according to the accommodation, care, and service required.

The history of an asylum for the insane which dates from 1814 must have many points of interest, and in its oldest records it is striking and instructive to find all the best treatment of to-day foreshadowed and approved.

In its earliest Rules, dated 1814, "the keepers," as they were then called, are absolutely forbidden "to strike or strive with a patient," or "to subject a patient to confinement, privation, or punishment of any kind, without express instructions from the physician or superintendent." To deceive, or terrify, or irritate a patient in any way is equally prohibited. Further, "No keeper shall indulge or express vindictive feelings; but, considering the patients as utterly unable to restrain themselves, the keepers must forgive all petulance and sarcasms, and treat with equal tenderness those who give the most and those who give the least trouble." A weather register is to be carefully kept by the superintendent "to determine how far the weather does or does not influence maniacal paroxysms." Case books shall be regularly kept by the physician recording the treatment and progress of each case. "All will be encouraged to employ themselves in useful occupations, in innocent amusements, and, above all, in taking regular exercise in the galleries, and, whenever the weather permits it, in the open air."

In 1815 the Report laments large expenditure, but justifies it because "it proceeds from the principle of sacrificing everything to the comfort and cure of the patients." "If the system of locking up the patients for hours together, or of putting them in chains whenever the keepers could not attend, were to be adopted, some of the keepers might be spared; but instead of being a dwelling of comparative comfort, the Asylum would then put on the appearance of a jail; patients would become sullen or vindictive; and the chance of recovery would be reduced almost to nothing." "Medicine avails little without such a regimen as may restore the patient to proper habits and soothe his troubled passions." "Harmless amusements, wholesome exercise, and useful

labours" promote contentment and recovery. Two looms have been erected for the patients' use, and spinning, knitting, and sewing are engaged in. One patient is rewarded for his skill and industry in weaving by having part of the money he earns placed in the savings bank in his name. Some patients write poetry, others work at mathematics, and others are public readers, to whom their fellow-patients listen with pleasure. The public are invited to contribute books or magazines for the use of the patients; also "draught boards or back-gammon tables; in short, anything which can serve to occupy the attention, and call off the thoughts from the objects or associations which disturb them." The Regulations of the Asylum are distributed throughout the West of Scotland, that ministers, doctors, and magistrates may be fully informed as to the mode of sending patients; and when patients are discharged, written directions for their care are sent to the relatives. Already the difficulty of finding and retaining good attendants is experienced, and a justly high estimate is expressed of the qualifications required.

In 1816 the Report tells of the pleasure afforded by little concerts at which the patients are the performers, and of letter paper being liberally supplied to all who desire to write, the risk of unwise letters going out being accepted on "the principle of removing from the Asylum, as much as possible, all appearance of a prison." The various occupations of the patients are detailed, and, "every encouragement is given to the exertions of industry, because nothing contributes so much to promote a cure or prevent a relapse." The importance of early treatment is insisted on, and the need for relieving the institution from the accumulation of incurable cases.

In 1817 the Report tells of a patient being allowed to visit her friends in town, to attend church, and to take another

patient with her, and of former patients returning voluntarily to the Asylum when they feared a relapse. It speaks of erroneous ideas as to the value of drugs, recommends the prevention of violence by a show of overwhelming force, which makes resistance hopeless, and advises the leaving of food within reach of a patient who is refusing his meals that it may be taken unobserved. A billiard room and a bowling green are added to the list of amusements. The difficulty, which exists to this day, of getting reliable information about patients sent to the Asylum is ground for serious complaint.

In 1819 Divine service, with a sermon as in church, was first observed in the Asylum.

In 1820 the advantage of out-door labour is strongly urged, although patients are also employed in all the various handicrafts. Gardening is recommended as an occupation for gentlemen patients. Cottages, or suites of apartments separate from the ordinary wards, are to be provided for high-class patients, where "they will be permitted to enjoy the greatest possible degree of personal liberty consistent with the necessary treatment."

Thus in the very earliest years of this institution we have the essential principles and an ample earnest of all that is best and most enlightened in the modern treatment of the insane. To Dr. Cleghorn, its then physician, all honour is due for so worthily laying down the great lines on which the Asylum has ever since been conducted. It is a genuine pleasure to recall the Christian sympathy, the enlightened philanthropy, and the practical wisdom of the founders of this institution. Their views were far in advance of the age, and supply a wholesome rebuke to the too prevalent spirit of to-day, which weakly worships novelty and notoriety, and loudly proclaims a discovery when it has only called an old truth by a new name.

At the same time these old records contain curious reminders of ideas and methods long since obsolete. In 1817 one of the officers is specially thanked by the Directors for inventing a leather muff which is better, and much less irksome, than a strait waistcoat, while "it is more seemly than handcuffs of iron, and in cold weather less disagreeable"; and in 1819 we read that "rotatory motion, by means of a whirling chair, has of late been tried in a great number of cases, and in some of them, with wonderfully good effect."

The wise and philanthropic spirit of the founders was well sustained by their followers. Thus, in 1826 Dr. Balmanno, a very able physician, and worthy successor to Dr. Cleghorn, writes:—"The treatment has been conducted as formerly. Due attention has been paid to those two important points—viz., the greatest practicable degree of personal liberty, and the use of proper means of employment. We are inclined to concur in opinion with those who judge that lunacy, like fever, has a certain course to run. And as the malady in most of our patients, when they are admitted, is in the progress of that course, a great part of our treatment consists in the use either of the means of moderating excitation, or of promoting convalescence. The most useful of these means, especially for the latter purpose, are such amusements or occupations as may engage attention and afford some degree of bodily exercise."

It is needless to follow the history of the institution, or to detail the many changes, improvements, and additions which the years have brought. The spirit in which the institution was begun has always animated the management, and throughout its history the first aim has been the welfare of the insane. Now that the administration is no longer hampered by want of funds, nothing is withheld that can promote recovery, and the benefits of the Institution

have been placed within the reach of the less affluent classes by reducing the payments to the lowest practicable rates. Great and unknown charity is constantly exercised by the directors in the reduction of board in necessitous cases.

The financial history of the institution has been chequered, necessary expenditure having outrun the available funds at the erection of both the original and the present buildings. At one time the debt exceeded £45,000, and this amount the directors had to borrow on their personal security. Not until 1879 was this building debt extinguished by the margin of profit which each year contributed, and the institution now possesses a reserve fund of £28,000 available for any extraordinary expenditure, and for pensions.

The present buildings afford suitable accommodation for 500 patients—300 private cases and 200 paupers. This great field is available for clinical instruction, the Physician-Superintendent being the University Lecturer on Insanity.

From the opening of the Asylum in 1814 till the close of 1887, 14,765 insane patients have been received for treatment, and of these 6,476, or 43·8 per cent, have been discharged recovered. The percentage of recoveries on the admissions of last year (1887) was 45·1, while the deaths were 5·5 per cent of the average number resident, and 4·1 per cent of the total number under treatment.

The benevolent exertions of the founders of the Glasgow Royal Asylum have thus borne noble fruit. The institution has been an unspeakable blessing to multitudes, and age has not lessened its efficiency and usefulness.

D. Y.

BARONY PAROCHIAL ASYLUM.

WOODILEE, LENZIE.

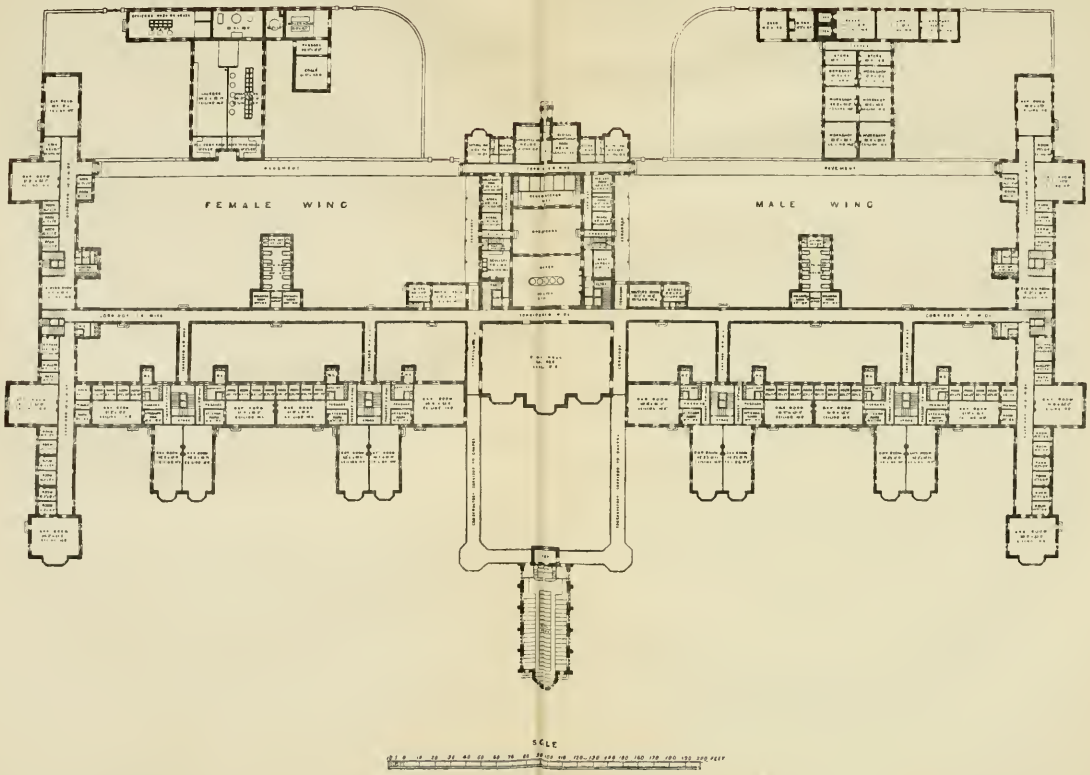
UNDER the Poor Law (Scotland) Act of 1845, the duty of providing for the care and treatment of the lunatics of a parish is laid upon the Parochial Board.

Previous to 1875 the Parochial Board of the Barony Parish of Glasgow, which is the largest and most populous in Scotland, having an estimated population of 289,457, and a gross valuation of £1,574,020, provided for the lunatics of the parish mostly in the wards of the poorhouse at Barnhill, near Springburn. These wards were licensed to accommodate 160 patients, the remainder of the patients chargeable to the parish being boarded in other asylums throughout the country. About the year 1870, owing to the continued increase of lunacy, the want of proper accommodation, and the expense incurred in maintaining the patients in other asylums, the Parochial Board appointed a committee to consider the whole question of lunacy accommodation, who reported "that the growing wants of the parish should be provided for by the erection of an asylum capable of accommodating 400 patients, and constructed with the view of eventual extension to accommodate 600, . . . that a new asylum must be erected; and on considerations alike of humanity, expediency, and economy, the committee recommend that it be a farm asylum of the nature and extent indicated." The Parochial Board having adopted this report, proceedings were at once taken to carry out the same by the purchase of the estate of Woodilee, comprising 167 acres of land, towards the end of 1871.

Plans were prepared by Messrs. James Salmon & Son, architects, Glasgow, under the superintendence of the General

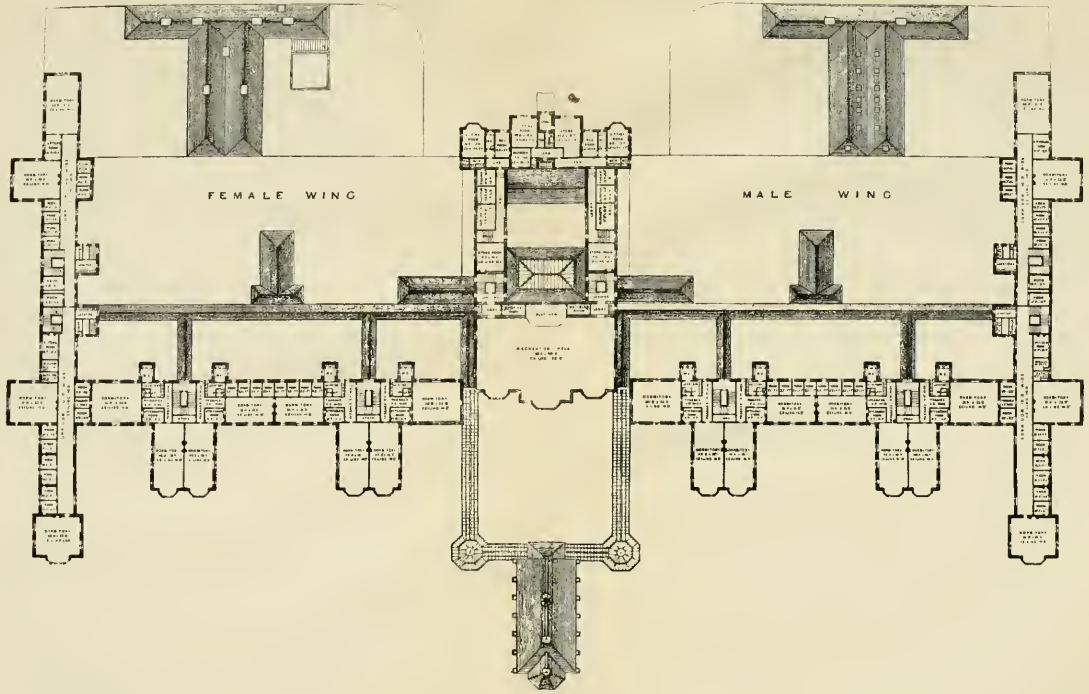
BARONY PAROCHIAL ASYLUM, WOODILEE, LENZIE.

PLAN OF GROUND FLOOR.



BARONY PAROCHIAL ASYLUM, WOODILEE, LENZIE.

PLAN OF UPPER FLOOR



Board of Lunacy and the Asylum Committee of the Parochial Board, and the building was thereafter erected with all despatch.

The main building is in the Elizabethan style of architecture, and is 700 feet long, with a corridor running its entire length. In the centre of the administrative block is situated the kitchen, where the food is cooked by steam. The dining hall and recreation hall are each 89 ft. by 44 ft. 6 in., on each side of the former being conservatory corridors entering into the chapel, where worship is conducted daily in presence of about 390 patients. In the two main towers large tanks have been fitted up for the supply of water throughout the building. Every freedom is allowed to the patients both inside and out, the men being chiefly employed, as already indicated, on the land and farm, and the women in usual household duties.

The Asylum, which is acknowledged to be one of the finest and most fully equipped asylums in the country, has been visited by specialists and others from all parts of Scotland and England, as well as from the Continent and America, all of whom have expressed their admiration of the arrangements which are provided for the treatment of the insane. It is situated about eight miles from Glasgow, and is about one mile distant from Lenzie Station. It occupies a conspicuous position, bordering the main line between Glasgow and Edinburgh on the North British Railway.

Recognising the liberal manner in which the Parochial Board had by its erection provided for all the lunatics of the parish, the General Board of Lunacy in 1881 granted the ratepayers thereof total exemption from assessments for lunacy purposes levied by the District Board; while under the powers conferred by the Lunacy Districts (Scotland) Act, 1887, the General Board has created the Barony Parish into a separate Lunacy District, with Woodilee as its District

Asylum. Its present staff consists of upwards of 70 male and female attendants, tradesmen, and other officers, under a medical superintendent and assistant.

It was opened upon the 22nd October, 1875, under the superintendence of Dr. Rutherford, now medical superintendent of Crichton Royal Institution, Dumfries. Since then the Parochial Board has acquired the adjoining estate of Wester Muckcroft, consisting of 148 acres, upon which there is a house and farm, where patients engaged in farm work are accommodated. In addition, 64 acres have been acquired and 80 acres are held on lease. In 1879 it was resolved to erect a thoroughly equipped farm succursal, which has since been occupied by patients who work upon the farm. The total land in connection with the asylum amounts to 459 acres, the greater portion of it being under cultivation; so that there is ample scope for the employment of patients in out-door work. The total cost to date of the land, buildings, farm, drainage of land, &c., railway siding, furnishings, &c., amounts to £201,202, 13s. 11d.

The license by the General Board of Lunacy has been extended from time to time, the whole buildings being presently licensed to accommodate 600 patients—320 males and 280 females. On 14th May last, the close of the financial year, the numbers resident were 283 males and 269 females, total 552, in addition to which there were boarded by the parish with private families, in various parts of the country, upwards of 100 patients, for whom curative treatment in the asylum was no longer necessary nor advantageous. The asylum is managed by a special committee appointed by the Board, under rules framed by the General Board of Lunacy and the Home Secretary, and is visited twice a year by the Commissioners in Lunacy, whose reports are published in the annual report of the General Board of Lunacy.

A special feature of the asylum is its system of sewage irrigation, which was commenced in 1879, and now extends to about 80 acres of land, with gradual periodical extension. The sewage is conveyed in iron pipes distributed throughout the fields, from which it is run off by hydrants placed at convenient places. The pasturage derives thereby immense benefit, more especially in dry seasons, and no deleterious effect upon the sanitary condition of the institution has ever been observed.

R. B.
J. R. M.

CITY PAROCHIAL ASYLUM.

This Asylum is associated with the Town's Hospital in Parliamentary Road, and is under the same general management. A short account of it, in its joint connection, is given in the description of that institution, to which the reader may refer. Only female insane are now received, and the number for which it is licensed has been reduced to 125. The male patients were removed about five years ago, owing to the increasing admissions of the ordinary poor, and the section of the establishment thus set free was added to the poorhouse. Previously, for many years, the asylum was licensed for 248 lunatics, and was always full or nearly so.

It is one of a small group of establishments which are peculiar to Scotland. They are under the immediate management of the boards of individual parishes, and receive for treatment and care the acute as well as the chronic forms of insanity. There are only six of them altogether, and one of them, the Barony Asylum at Woodilee, Lenzie, the largest and most important of the group, by an Act of Parliament which has just come into operation, has been taken out of the category, and will, in future, we understand, be included among district

asylums. The City parish will, ere long, be on a similar footing; for by virtue of the same Act, its Board are empowered to erect an asylum for all the insane poor of the parish; and they have determined to do so without delay. It will be situated some miles out of town, and, when ready to receive patients, those in the present building will be transferred to it, the poorhouse being thus further enlarged. This, however, can scarcely be carried out within a shorter period than three years.

To prevent misapprehension regarding the provision for the insane poor in Scotland, it may be well to state that the majority are accommodated in the Royal and District Asylums. A portion of the chronic and harmless insane occupy special wards in ordinary poorhouses, corresponding to those in other parts of the kingdom; a considerable body reside with their relatives, while a large and steadily increasing number are boarded in specially licensed private houses, but not more than four under one guardian. This last arrangement is known as the Scottish boarding-out system, and does not exist in any other country.

A. R.

GOVAN PAROCHIAL ASYLUM.

MERRYFLATTS.

Previous to the year 1857 the Govan Parochial Board found accommodation for their pauper lunatics in Glasgow Royal Asylum, Gartnavel, and in Kirklands Asylum—then a private, now the District Asylum for the Glasgow Lunacy District. In that year, however, in consequence of the increasing difficulty of providing for the lunatics of the parish, the Board made extensive improvements and alterations in the then poorhouse in Eglinton Street, Glasgow, to meet the

them a licence for lunatic wards for the care of certain chronic and harmless patients. They were still dependent on Gartnavel and other asylums for the care and treatment of acute and dangerous cases. It was not until 1873, when the poorhouse was removed to its present site at Merryflatts, that—owing to the very inadequate provision for pauper lunatics within the Glasgow Lunacy District—the General Board granted authority for the reception of acute and dangerous as well as harmless and incurable patients.

The Asylum, although still technically the lunatic wards of Govan Poorhouse, was from that time fundamentally changed in character. It was equipped as a hospital for the treatment of the insane, with a sufficient staff of attendants, while in-door and out-door amusements, and nearly 30 acres of land, afford healthy and profitable employment for the patients. Practically, since 1873 it has been doing the work of a district asylum for the parish of Govan, and, considering the exceptional difficulties, doing this work well.

During the decade 1871-1881 the population of the parish rose from 161,000 to 238,000, and this year the estimate is 260,000. With this there has been, of course, a corresponding increase of insanity. To endeavour to meet this rapidly growing necessity, the Asylum, which was originally designed for 180 inmates, was enlarged to 244, its present limit; and it is still much too small for the wants of the parish.

During the fifteen years previous to 31st December last a total of 2,223 cases were admitted; and notwithstanding the unfavourable influence of overcrowding, an average recovery rate of 39·6 per cent on admissions was obtained.

The Parochial Board have for some time felt the pressing necessity of further provision for the pauper lunacy of the parish, but owing to various reasons it has been delayed. The parish is now in a transition state. The recent Act, views of the General Board of Lunacy, and obtained from

which empowers the General Board of Lunacy to divide existing districts as they may see fit, has led to the erection of Govan into a separate lunacy district, with power to assess. In no long time we may hope for a large increase of our means of dealing with the insane of the district; above all, ample land for work and recreation, improved buildings, and other aids for carrying out still more fully the modern views of treatment. W. R. W.

THE GLASGOW DISTRICT ASYLUM.

BOTHWELL.

This Asylum, built of red sandstone, in the Scotch baronial style of architecture, and flanked by two handsome towers, is situated at Bothwell, seven miles south-east of Glasgow. Erected originally for use as a private asylum, and conducted as such for eight years by the late Dr. Dean Fairless, it was purchased by the Glasgow District Board of Lunacy in 1878; and, after enlargement and remodelling so as to accommodate 200 patients, was opened in 1881 as the District Asylum of the Board.

This Asylum, commonly known as Kirklands Asylum, has only seven acres of land attached, and is bounded on all sides by hedges and public roads, which give to it an aspect of freedom; but the limited accommodation and surrounding space are scarcely adequate to meet the wants of a District Asylum, though the most is made of it under existing circumstances. The training of attendants is made a specialty, and has been productive of good results.

The future of the Asylum is uncertain, for the Glasgow District Board of Lunacy will cease to exist very shortly, as the result of a special statute passed last session, and will be replaced by four Divisional Boards. A. C. C.

Dispensaries, &c.

—o—

Glasgow Dispensary for Skin Diseases, 8 Elmbank Street.—This dispensary, established in 1861, is open for out-door advice on Monday, Wednesday, and Friday, at 2 o'clock P.M., and about 1,200 cases are treated annually. In connection with it, there are 20 beds and a suite of baths in the Western Infirmary, to which the more serious cases are sent. It is supported by voluntary contributions, and by donations from patients. There is one physician; and a practical course of instruction for students is held on Mondays and Wednesdays at 2·30 P.M. during May, June, and July.

Dispensary for Diseases of the Chest and Throat, 107 Dundas Street.—This was opened in 1861 for the treatment of poor persons suffering from chest disease, whose circumstances rendered them deserving objects of gratuitous medical relief, and ever since its foundation the benefits which it offers have been largely taken advantage of by the sick poor of Glasgow and neighbourhood, the yearly number of applicants for advice being about 1,000, to some of whom medicine is also supplied gratuitously.

In, 1876 the late Dr. David Foulis undertook, in connection with this institution, the treatment of cases of disease of the Throat, a department in which he had already earned a high reputation. Until a short period before his death, which took place in October, 1881, he displayed unwearied zeal in performing the duties which he had undertaken, and the records of the numerous cases which he treated at this dispensary embrace many operations, which were attended by complete success, as well as by a great mitigation of pain and suffering. The applications for advice in this department during 1881 amounted to nearly 900 cases; and of these, 204 were patients who had not been previously under treatment.

In 1885 this part of the work was resumed; and, in 1887, 238 patients visited the institution, requiring 719 consultations.

The dispensary is supported by voluntary subscriptions, and the two medical officers give their services gratuitously.

It is open for diseases of the chest on Tuesday and Friday at 1 P.M.; and of the throat on Monday at 8 P.M., and on Thursday and Saturday at 1 P.M.

Glasgow Medical Mission, 123 Moncur Street, Calton, and 6 Oxford Street, S.S.—The Glasgow Medical Missionary Society was instituted in 1867 by a representative Board of Directors, comprising doctors, clergymen, and commercial gentlemen connected with various evangelical denominations. Its objects are (1) to carry on medical mission work among the poor in Glasgow; (2) To encourage a missionary spirit among the medical students there; and (3) To co-operate with kindred societies in training and supporting medical missionaries.

The Dispensary at 123 Moncur Street, Calton, is open on Monday, Tuesday, Thursday, and Friday, from 11 to 1

o'clock; and that at 6 Oxford Street, S.S., is open on Monday, Thursday, and Friday, from 12 to 1 o'clock. An evangelistic service is conducted by the physician superintendents from 1 to 1·30 P.M. on these days, and every Sunday a service is held at each dispensary at 2·30 P.M.

About 20,000 new cases of all kinds are treated annually at the dispensaries, requiring about 50,000 consultations; and, in addition, visits are paid to the sick poor who are unable to attend. Two medical superintendents, two assistant physicians, two senior medical students, and five or six bible-women nurses, along with two female dispensers, constitute the medical staff. The work of the mission is supported entirely by voluntary contributions.

Hospital for Diseases of Women, 24 Woodlands Road.—This was founded as a dispensary in 1876, and its object is to give advice and treatment to women suffering from diseases peculiar to their sex. It is open on Monday, Tuesday, Thursday, and Friday, at 3·30 P.M., and the number of out-door cases treated yearly is about 500, the large majority being cases of uterine disease, and the remainder being affections of the bladder and rectum. The building contains two beds, and the patients, who are admitted free to these, are selected from the out-door cases, the only qualification being poverty. The institution is supported by voluntary subscriptions and also by contributions from patients. There are two physicians and one assistant physician, who give their services gratuitously.

The Glasgow Public Dispensary.—This institution, situated at 54 Dundas Street, was formed in 1876. It was established for the purpose of giving gratuitous medical advice to persons in necessitous circumstances,

not receiving parochial relief, and to test the acceptability of an institution embracing provident features to the poor of the city. While a large section of all communities above the rank of actual paupers are able to maintain themselves, they are unable to afford adequate remuneration to medical men; while, at the same time, they are not so impoverished as to be unable to contribute towards such a boon, and, at this institution, while advice is given gratis to the deserving poor, such as are able are invited and requested to pay for the medicine prescribed. The Dispensary is supported by public subscriptions, the money received for drugs, and occasional contributions from patients. The medical officers receive no payment.

Opportunities are afforded to medical students to study special diseases under the medical staff, and the following special cliniques are conducted several times weekly—viz., Diseases of the Throat and Chest, Diseases of the Skin and Ear, Diseases of the Kidney and Urinary Organs, Diseases of Women and Children. Students are invited to visit patients unable to come to the Dispensary, under the supervision of one or more of the medical officers. This is one of the few medical institutions represented on the Charity Organisation Society.

Anderson's College Dispensary, 232 George Street.—This was opened in 1878, and has in view the twofold object of giving gratuitous advice to the sick poor, and visiting them at their own homes when necessary.

The staff consists of seven surgeons, seven physicians for general diseases, three physicians for diseases of women and children, two physicians for diseases of the skin, one surgeon for diseases of the eye, one surgeon for diseases of the ear, two surgeons for diseases of the throat, and a medical officer

to superintend the out-door visiting department, besides a dispenser of drugs, and an attendant.

It is open for advice every lawful day from 2 to 3 o'clock for general diseases; on Tuesdays and Thursday from 2 to 3 o'clock for diseases of women and children; on Wednesdays and Saturdays from 2 to 3 for diseases of the skin; on Mondays and Fridays at 2 o'clock for diseases of the eye; on Wednesdays and Saturdays at 12 o'clock for diseases of the ear; and on Mondays, Wednesdays, Thursdays, and Saturdays at 1 o'clock for diseases of the throat. Two surgeons and two physicians are on duty for one month at a time, and they sit on alternate days—one taking Monday, Wednesday, and Friday; and the other, Tuesday, Thursday, and Saturday. The physicians for diseases of women and children, and skin diseases, and the surgeons for diseases of the eye, ear, and throat attend regularly throughout the year on their respective days. The medicines are dispensed gratuitously to such patients as are in necessitous circumstances.

The home visitation of the sick poor is undertaken within the City of Glasgow in the districts embraced within the following boundaries:—*East*, a line drawn from Charlotte Street to Tennant's Chemical Works, including High Street and Castle Street. *North*, a line drawn from Tennant's Chemical Works to head of Garscube Road. *West*, a line drawn from head of Garscube Road to south end of Finnieston Street. *South*, bounded by north side of River Clyde, from Stobcross Street to Charlotte Street. The dispensary is open every lawful day at 1 P.M., and at 1·30 P.M. the medical officer is in attendance for the purpose of receiving and entering in a book the names and addresses of patients who require to be visited at their own homes. Thereafter a list of the names and addresses of the cases, along with the names of the students in whose district the patients reside, is

made out and delivered to the students who are in attendance. The senior students have the home cases allotted to them, and they, in conjunction so far as practicable with junior students, visit the cases. After a home case has been visited, the student in charge, before the next dispensary visit, enters in a book, opposite the name and address of the patient, the nature of the disease and the treatment recommended. Each student keeps a record of his cases in a pocket register provided for the purpose. In cases of doubt, difficulty, or danger, the student consults the medical officer, and no prescription recommended by a student is dispensed unless it bears the initials of this officer.

The following table shows the work undertaken during last year:—

CONSULTATIONS.

Number of Surgical Consultations,	3,255	comprising	2,561	New Cases.
„ Medical „	9,219	„	6,387	„
„ Consultations for Diseases of Women and Children, . . .	1,353	„	1,164	„
„ Consultations for Diseases of the Skin, .	1,979	„	918	„
„ Consultations for Diseases of the Eye, .	605	„	349	„
„ Consultations for Diseases of the Ear, .	500	„	220	„
„ Consultations for Diseases of the Throat,	1,283	„	507	„
Total Consultations, . . .	18,194		12,106	
Total Number of Prescriptions Dispensed, ...				18,687

VISITS.

Number of Visits to Sick Poor,	3,149	comprising	1,291 New Cases, of which 40 have been Confinements.

In addition to the above the dispensary undertakes the visitation of the pensioners on the out-door fund of the

Association for the Relief of Incurables for Glasgow and the West of Scotland. These number about 150, and are attended by the students, under the direction of the superintendent of the out-door visiting department, each patient being visited on an average three times during the year.

The institution is supported entirely by voluntary contributions, and the medical men on the staff all give their services gratuitously, except one of the surgeons and the superintendent of the out-door visiting department.

Glasgow Dental Hospital and School, 56 George Square.—This dispensary was instituted in 1879, and reconstituted in 1885. The objects are—(1) To provide the poorer classes with gratuitous advice and surgical aid in diseases and irregularities of the teeth; (2) To provide a school of dental surgery open to all students of dentistry. It is open daily from 5 to 7 P.M., except Saturday, when the hours are 9 to 11 A.M.; and the number of patients during 1887 was 8,242.

Glasgow Polyklinik, 100 Elderslie Street.—This dispensary was established in 1885 by several specialists, their chief object in doing so being to obtain a sufficient supply of clinical material to enable them to teach successfully in their respective departments.

At first it consisted of four departments—namely, that for the study and treatment of (1) diseases peculiar to women; (2) diseases of the ear and throat; (3) diseases of the eye; (4) diseases of the skin. At a later date, two others were added —(5) diseases of the nervous system; and (6) diseases of the urinary organs. There are no didactic lectures; but in some instances the clinical instruction given here is supplementary to systematic courses given at the Western Medical School.

It is open to medical students and practitioners. The sessions are divided into the usual winter and summer courses, except in the Gynæcological Department, where during the year there are three courses each of three months' duration, in which the number of gentlemen attending is strictly limited to three. An innovation in the conducting of dispensaries in Glasgow, and one which has proved distinctly popular with students, was here first introduced—namely, giving demonstrations in the evenings. By this arrangement a larger number are enabled to take advantage of the practical instruction.

There is one bed for the use of any patient whom it is thought advisable to detain.

The polyklinik is supported entirely by the members of the staff. There are no medicines dispensed, though individual members of the staff as a rule arrange with a chemist to have prescriptions dispensed at the lowest possible price to deserving poor persons. The average attendance is over 2,000 per annum.

Glasgow Samaritan Hospital for Women, South Cumberland Street.—This institution was opened in 1886 for women of the poorer classes affected with serious diseases, more particularly those peculiar to their sex, unsuitable for the wards of a general infirmary. The dispensary is open for advice on Monday, Wednesday, and Friday, at 4 P.M.; and the in-door department contains eight beds, one ward having four beds, the other beds being in separate rooms. During last year 203 patients attended the out-door department, and 90 patients were admitted to the hospital to undergo surgical operations. No infectious cases are taken in. The medical officers, who give their services gratuitously, consist of a consulting physician, two physicians, a surgeon,

and an anæsthetist; and under the matron there are two nurses. It is supported by voluntary contributions; and each donor of £5 is entitled to recommend one patient yearly for admission, donors of £10 or more being entitled to recommend two patients yearly for every £10 subscribed, while annual subscribers are entitled to recommend one patient yearly for every £1, 1s. subscribed. Cases of emergency are admitted without the usual recommendation.

Glasgow Ear Institution, 241 Buchanan Street.—This Dispensary was established in 1887 by the two acting surgeons in order (1) to afford advice and treatment in cases of ear disease and deafness among the poor, and (2) to obtain material for the study and practice of aural surgery. The average number of new patients treated monthly is 86, and each patient makes on an average four attendances. The institution, which is supported by the voluntary contributions of the patients, is open daily at two and seven o'clock; and the surgeons visit the serious cases, which occur rarely, at the patients' homes as may be required.

Glasgow Cancer and Skin Institution, 409 St. Vincent Street. — This institution was established in 1887 for the special treatment of cancer and diseases of the skin. Accommodation is provided for several in-door patients, and the benefits of the institution are free to the poor, from all quarters, who suffer from these diseases. It is entirely supported by voluntary contributions, and the work is conducted by one medical officer.

C. F. P.

GLASGOW POLICE DISTRICT SURGEONS.

THERE are seven of these medical officers, one being attached to each of the following districts in which he must reside—viz., Central, Western, Eastern, Southern, Northern, St. Rollox, and Marine. The surgeon may be called on to attend injured persons in any part of the district under his care, as well as to carry out other duties in connection with his office. The number of cases seen in one year is about 7,000, including inquiry into and external examination of the body in cases of sudden death.

The duties of each of these district surgeons may be summarised as follows:—

1. To attend all prisoners in the police offices of his district requiring medical aid, and to provide all medicines and appliances necessary for treatment.

2. To attend all casualties occurring by day or night in his district requiring medical or surgical aid, and supply medicines or other requisite appliances, and particularly to visit all persons reported to him to have been assaulted or otherwise injured, whose cases become the subject of investigation by the police, and to report whether the injuries sustained are of such a dangerous nature as to render it necessary for a magistrate to be called to take the injured person's deposition, or whether, from the injuries being of a less serious nature, the accused person, if in custody, may be admitted to bail. When the life of an injured person may appear to be in danger, to give immediate notice to the superintendent or superior police officer on duty, and furnish him with a certificate to that effect, stating whether in his opinion the person is or is not in a fit state to emit a declaration.

3. To attend by day or night and supply medicines or other appliances in all cases of sudden disease, accident, or violence, occurring in the district to any of the officers or servants of the police establishment.

4. To visit from time to time all injured persons in his district whose cases are undergoing investigation, in order that he may be enabled to give full medical evidence when necessary, on the trial of the accused person.

5. To visit from time to time all insane persons who may be in the police office, with a view to their being disposed of according to law; and to grant such certificates as may be necessary for this purpose.

6. To visit all accused persons and witnesses as may be reported unable to attend Court from indisposition.

7. To make external examinations of bodies in all cases of sudden death, or of death under suspicious circumstances, and furnish in each case a written report as to the probable cause of death, so far as the same may appear from such examination and other circumstances.

8. To grant written certificates and reports in all cases occurring within the district, when such may be required by the Superintendent or Procurator Fiscal for police cases.

9. To attend in the police office of his district on the last night of the year, on Her Majesty's Birth-Day, and on any other occasion when his services are likely to be required; also to give attendance on receiving notice of any serious fire or disturbance.

10. To inspect, whenever called upon, the carcases of any animals suspected to be diseased, or any butcher meat, fish, poultry, or other articles of provision suspected to be unsound, or unwholesome, or in a state unfit for human food, and to give medical evidence in all such cases tried in the police court.

11. To inspect all adulterated provisions, confections, and other articles, when required by the superintendent, and to attend the police court, and give evidence thereanent.

12. To make such examinations and reports respecting alleged nuisances as may be required.

C. F. P.

AMBULANCE ASSOCIATION.

OFFICE: 93 WEST REGENT STREET.

THE St. Andrew's Ambulance Association was originated in Glasgow in 1882, and already embraces a wide area. It has two objects.

In the first place it aims at imparting to the public such a knowledge of what is required as "First Aid" to persons injured or taken suddenly ill, that intelligent assistance may be rendered till the arrival of a medical man. For this purpose classes are formed, either connected with large works, railway companies, or the police force, or in any desired locality; and each class is conducted by a doctor, who delivers a short course of about ten lectures, including the practical training of the members in the treatment of fractures, wounds, burns, drowning, and so forth. Ladies' classes receive instruction in sick-nursing also. To everyone passing an examination satisfactorily a certificate of proficiency is granted. The rate of admission is usually 2s. 6d., but in some cases it is more, ladies' classes, for instance, being charged 10s. 6d. The information thus acquired is, of course, limited and quite elementary; but it is complete in the sense that it is sufficient to enable any person so trained to afford such improvised help as must be given immediately or in the absence of medical attendance, to

relieve suffering or prevent further mischief. The success of the movement is largely due to the interest of the public having been met by the enthusiasm of the members of the profession, who have given their services gratuitously.

The second object has to do with the transport of the injured. The members of the classes are taught the proper methods of moving patients and the use of stretchers; and stretchers and ambulance waggons of a good pattern, or wheeled litters, with other appliances necessary for the relief of the injured, are placed in suitable situations, so that assistance may be given with the least possible delay. The Glasgow waggons are at the call of any person by day or night, free of all cost within the parliamentary boundaries of Glasgow; and on the receipt of an alarm by messenger, telegraph, or telephone, they are sent with all possible speed to the scene of accident with a trained attendant. Accidents occurring outside these boundaries and within a radius of ten miles from Glasgow are also attended to, at a charge in the case of non-subscribers of 2s. per mile; and the waggons are further available for the removal of invalids, at the same rate to non-subscribers: but beyond the ten mile radius a special arrangement is required.

A few facts will give an idea of the work which has been done under the auspices of this association. During the past year, 241 classes were held in 81 localities, and 6,655 pupils were trained; the total number thus taught since the formation of the association being 19,969 in 501 classes, of whom 10,409 obtained certificates. A considerable number of towns all over Scotland have participated in this instruction, classes having been organised in them; and in several instances this has resulted in the formation of a permanent ambulance corps, to keep the members in

training. There are now centres in the following places, which are mentioned in the order of their establishment:— Coatbridge, Edinburgh, Dumbarton, Pollokshaws, Baillieston, Portobello, Annandale, Falkirk, Hamilton, North Berwick, Greenock, Ayr, Crieff, Kelso, Port-Glasgow, Dumfermline, Grangemouth, Perth. In the majority of these places waggons are to be found. During last year 1,067 calls were made on the three Glasgow waggons alone, 1,031 cases having been attended to, chiefly for removal to hospital.

The association is supported by voluntary contributions, class fees, fees for removal of invalids, and the profit on the sale of ambulance materials such as triangular bandages, handbooks, and boxes, knapsacks, or baskets with bandages, splints, and other articles for public works or households.

C. F. P.

Sanitary and Cleansing Departments.

—o—

THE SANITARY DEPARTMENT.

The Sanitary Office is at 1 Montrose Street (private entrance, 118 Ingram Street); the Vaccination Hall, 122 Ingram Street; the Reception House, 39 Weaver Street. The Office is connected by private telephone with the 13 Police Stations throughout the city, and with the Hospitals and washing-house at Belvidere, besides being on the public telephone system.

The population of Glasgow is estimated by the Registrar-General to be 526,000. The area is 6,111 acres. The city has been divided into twenty-four "statistical subdivisions," and these again have been grouped into five main districts, as nearly equal in size and population as the present divisions admit of. These subdivisions form the basis upon which the vital statistics of Glasgow are compiled by the Medical Officer, and upon which the sanitary administration of the city is built.

The work in these divisions may be divided into three parts, viz.:—

(1.) Epidemic work, or work dealing with infectious disease, its discovery and removal.

(2.) Nuisance work, or work dealing with offensiveness, filth, and physical defects.

(3.) House visitation, among the poorer classes, by the female inspectors in order to inculcate cleanliness and proper habits.

These parts of the service are undertaken by eight epidemic inspectors, sixteen nuisance inspectors, and six female inspectors, under the direct superintendence of five district inspectors or foremen.

The district inspectors' duties are as follows:—

1. To confer with, report to, and receive directions from the Medical Officer and Sanitary Inspector.

2. To examine the ordinary inspectors' report books, check them, and in important cases (such as appear after smoke tests) to write out the specification of work requiring to be done for the clerks to copy.

3. To personally inspect nuisances considered important as presenting special difficulties, or on account of personal differences between landlord and tenant, or between the author and complainer.

4. Visiting, when necessary, in the routes of the ordinary and female inspectors, thus checking their returns.

5. Meeting owners on the ground in cases of proposed alterations or extensions of property, and making sketch plans of same.

6. Making correct sketches, showing the dimensions, surroundings, &c., of any thing or place in or about which a nuisance is said to exist; so that the Sanitary Inspector may be able to confer with the parties or correspond clearly on the subject.

7. Attending during progress of smoke tests, visiting each house under the operation, and inspecting for evidence of defects.

8. Attending Police and Sheriff Courts when necessary;

assisting to obtain compulsory removal to the hospital; making special reports either at the request of the Medical Officer or the Sanitary Inspector, &c.

The epidemic inspectors are chosen from the detective or superior policeman class. They search for and follow up all information obtained as to existing infectious disease; seeing to removal to hospital, isolation at home, disinfection, and all other points in preventive work under the personal direction of the medical officer.

The nuisance inspectors, in a similar way, search for and take the first steps for having nuisances removed. They are usually and by preference chosen by competitive examination from the class of wrights, masons, or plumbers.

Each man makes from forty to fifty inspections daily. The districts in which they work vary in contour and size, and in the character of their inhabitants, but everything has been done to secure approximate equality of work.

For female inspectors, the endeavour is to obtain the service of ladies having sympathy and discretion, to endeavour to raise the conceptions of household cleanliness in the minds of the very poorest housekeepers. Their work is very interesting, and is believed to be beneficial.

The in-door staff is composed of nine clerks, one draughtsman, and two boys. Three of the clerks are constantly engaged in the Epidemic Department, making up and tabulating statistics, keeping the registers, and attending to those requiring hospital services. The other clerks are attached to the Nuisance Department. A large correspondence and record-keeping is undertaken by them. They also have the public bar work to attend to where information and complaints are received from the public; the disposing of unclaimed dead, collection of moneys connected therewith, keeping of the accounts, making up the pay bills, &c.

The draughtsman relieves the district inspectors of the labour of making precise drawings of conveniences, ashpits, or any structure which the department wishes built or altered. He also undertakes special work when necessary, either for sheriff court or other purposes.

There is sufficient reference to the wash-house and house-disinfecting staff in the description of the hospitals, Belvidere. Their number varies with the work to be done.

In the Night-Visitation Department there are six inspectors. Their duties consist in the detection of overcrowding in dwellings which have been measured and ticketed under the Glasgow Police Act, and in "Houses Let in Lodgings" under the Public Health (Scotland) Act. There is also an Inspector of Common Lodging Houses. Their work is of the greatest importance to the health of the city.

There are three smoke-testers daily at work on the drains of the city.

Two food inspectors are employed to detect unwholesome and adulterated food. They also enforce the regulations made by the Local Authority, under the Privy Council's Orders anent Dairies, Cowsheds, and Milk-shops.

The Reception House is a small self-contained house in charge of a matron, with the necessary servants. The healthy members of families infected with typhus, especially, are boarded and lodged there. Clothing is also supplied until their own is purified.

The Vaccination Hall is open twice a week, and thirty to forty children are vaccinated weekly, from whom a large stock of lymph is maintained, besides supplying the profession in Glasgow freely.

The whole sanitary administration of the city is in charge of a "Committee on Health" of the Town Council, consist-

ing of eighteen members, with two sub-committees, one on "Cleansing" the other on "Hospitals."

The following is a synopsis of the death-rate of Glasgow for 30 years:—

Mean death-rate,	1857-66,	30·4
Do.,	1867-76,	30·2
Do.,	1877-86,	26·3
Death-rate,	1887,	23·0

P. F.

THE CLEANSING DEPARTMENT.

The general cleansing of Glasgow is under the charge of a special committee of the Magistrates and Council. This sub-committee on cleansing consists of one half of the members of the General Health Committee, the other half forming the sub-committee on Hospitals. The minutes of the sub-committee are reported to, and approved of by, the Health Committee before being submitted to the Council. The Cleansing Department is thus constituted a distinct branch of the Health Department. The Chief Officer—termed in the Police Act "Inspector of Cleansing"—is intrusted with the appointment and control of his whole staff, and is held responsible for their good conduct and for the general efficiency of his Department.

The total staff on the roll of the Department numbers 850, and the stud of horses numbers 180. The cartage of refuse and material of all kinds in one year amounts to 228,000 tons, or an average of 730 tons per working day.

The work of the Department embraces (1) the scavenging of all courts and back yards forming a common access to lands and heritages separately occupied; (2) the scavenging

and watering of all the streets and roads within the city; (3) the collection, removal, and disposal of all night-soil, general domestic refuse, and detritus.

With regard to (1) the scavenging of courts and back yards — of which there are some 11,000 — the six districts are sub-divided into 13 sections, and these again into about 200 beats; so that each section has its overseer, and each man his appointed beat, which he must regularly cleanse. The courts are, under this arrangement, scavenged once, twice, or even thrice a day, according to the requirements of the respective localities.

With regard to (2) the sweeping of the streets, of which there are 181 miles within the city, the greater part of the work is accomplished during the night, between 11 P.M. and 8 A.M., by 23 horse-drawn sweeping machines. All the principal streets are traversed by these machines every night, and carts follow them as closely as possible to remove the sweepings. During the day men and boys work upon fixed beats or stations, brushing the channels and picking up droppings, paper, &c. The material thus picked up, during the day, is deposited in specially designed bins which are sunk level with the pavements at intervals of about 40 yards, so that the necessity for having unsightly heaps of droppings, &c., lying on the streets during the day is done away with.

The most difficult part of the duties of the City Cleansing Department, as well as the most important from a health point of view, is (3) the domestic refuse and night-soil collection and disposal. In the collection and removal of the general house refuse, there are two systems in operation within the city. There is, firstly, the daily morning dust cart system; and, secondly, the ashbin or ashpit system. The former is in operation chiefly in the central district of the city, where the buildings are principally occupied as shops,

offices, and warehouses. Each dust cart—a specially designed float with cranked axle and arched cover—has its appointed route, which it begins to traverse at 8 o'clock every morning. An hour is generally occupied in emptying the long series of buckets on the route, so that at 9 o'clock all the empty buckets can be taken in by the occupiers. The uniform covered buckets, specially contracted for, and supplied by the department at cost price, are a great improvement in working this system. This daily system suits very well where it is applied, and for districts of self-contained dwelling-houses. For the flatted tenements of Glasgow, however, in which 25 per cent of the population live in single-apartment houses, and 45 per cent in two-apartment houses, the system is unsuitable. For these it is considered necessary to have an improved ashbin in the back court, into which refuse, excrementitious or otherwise, can be thrown at any hour of the day, rather than have it kept in the house until the morning dust cart comes round. Consequently the great bulk of the domestic refuse in Glasgow is collected from fixed ashbins in the back courts. For the emptying of these there is, as already said, a separate organisation. The work is all done during the night between 11 P.M. and 9 A.M. In the central district the bins are emptied twice a week, and in the other districts once a week. This is simply arranged by mapping out each district into six sections or blocks—one for each working night of the week. Following the ashpit cleaners, comes a staff of hosewashers, who scour the dirty courts and closes.

The old system of privy and ashpit combined has now been almost entirely abolished in Glasgow. Water closets have been very largely adopted, and their number is increasing year by year, so that the excrementitious matter falling to be dealt with by the department is becoming gradually less.

A considerable quantity still remains, however, and is systematically collected from pail closets in connection with dwelling houses in the poorer localities, as also at factories, workshops, mills, &c. Patent spring covers are placed upon the pails, and they are removed in covered vans, a clean pail being put down in exchange at each removal.

To get the whole refuse of the city ultimately disposed of promptly, and in accordance with sanitary principles, has been the chief difficulty experienced by the Cleansing Department. The natural destination of manurial refuse is the land where it becomes the food of plants. Scotch farmers, as a rule, prefer bulk manure to chemical manures. That being so, we have endeavoured to place within the reach of as many of them as possible all that is manurial in our city refuse. The result is that we supply city manure to 2,400 farmers whose holdings are scattered over fifteen different counties. To prepare this manure and get rid of the non-manurial rubbish at the same time, Refuse Despatch Works have been erected at St. Rollox on the north, and Tradeston on the south side of the river. Thither the ashpit refuse, night soil, and street sweepings are separately carted, and summarily disposed of by machinery specially designed and adapted for the purpose. The night soil is emptied from the pails into sealed tanks. The street sweepings, when sloppy—as in our climate they very often are—are run into draining tanks of novel construction. The general ashpit refuse is tipped down a shoot into a double acting revolving screen. The finer portion passes though the meshes of the screen into a mixing machine along with a mechanically regulated quantity of excreta from the soil tanks. The street sweepings, when dry, are screened along with the other refuse. The sloppy sweepings, when drained, are drawn from the draining tanks, and can be either dropped into the mixing machine or into the railway waggon

direct. The mixed compost—in a great measure deodorised and free from all hard rubbish—is delivered from the machine right into railway waggons, and despatched forthwith to the country. The double-acting screen referred to delivers at its one end cinders in sufficient quantity to raise steam for all the requirements of the works. At its other end it delivers upon a carrier which shoots into the cremating furnaces all the rougher rubbish. A person stationed at this carrier picks off and drops down the manure shoot anything fit for manure. Meat tins are picked off and sent to the solder extracting furnace; old iron and everything saleable being turned to account. The cremating furnaces which swallow up all the rougher rubbish have been, like all the other machinery and apparatus in the works, designed in the office of the Department. The material is dropped right into the centre of the fire. The furnaces have large fire grate area, and wide flues connecting with a 240 ft. chimney. A large fan, capable of passing 29,000 cubic feet of air per minute, exhausts from the soil and mixing rooms, and blows the vitiated air through large pipes into the chambers under the bars of the cremating furnaces. This arrangement serves the double purpose of satisfactorily disposing of the foul air, and at the same time creating a blast for the furnaces. The clinkers drawn from the furnaces go to make up ground.

The only material not yet referred to is the scrapings of the Macadamised roads. These are shot into waggons at the works, and conveyed to the farm of the Department at Fulwood Moss, ten miles distant. Nine years ago the Magistrates and Council entered on a 31 years' improvement lease of this farm, which extends to close upon 100 acres. At that time it was a useless heather bog, but it has now been thoroughly reclaimed, and with the application of the road scrapings yields magnificent crops. A considerable part of

the work of reclamation was done by the "unemployed" in the first months of 1879.

At the Despatch Works and other yards of the Department suitable lavatories and baths, as also mess rooms, with the necessary cooking and heating conveniences, have been provided for the workmen, so that both their outer and inner man may experience in some degree the comforts of civilisation. Their work is necessarily of a dirty and disagreeable nature, and it is only right that they should be encouraged by little attentions of this kind. The creditable appearance they make at their winter soiree and summer trip to the farm shows that any efforts made in this direction are appreciated.

In the manner above described, the removal of the refuse of the city goes systematically on during each night, and by 10 o'clock in the morning it has practically all been disposed of.

J. Y.

Miscellaneous Institutions.

CONVALESCENT HOMES, AND HOMES FOR INCURABLES.

Glasgow Convalescent Home, Lenzie. *Office:* 183 West George Street, Glasgow.—The "Glasgow Convalescent Home," instituted in 1865, is situated at Lenzie, a few miles to the north of Glasgow, and has accommodation for 67 patients, of whom 30 are taken from the Glasgow Royal Infirmary, 10 from the Western Infirmary, and 27 from the general public, the subscribers having the privilege of recommending the latter cases. The ordinary expenditure is about £1,700 a year, and between 1,400 and 1,500 persons are admitted annually. There are two visiting medical officers.

Patients from the Royal or Western Infirmary must procure a certificate signed by one of the physicians or surgeons, and countersigned by the superintendent of the Infirmary. Patients from the general public must procure a line of recommendation from a contributor or annual subscriber; and this line is presented by the patient to the collector of the home, who countersigns it; the patient then delivers the line to the examining medical officer, who examines the applicant, and, if satisfied, delivers to him a certificate, which the patient presents to the matron on being admitted to the home.

All contributors of £10 or more, and all annual subscribers of £1, 1s. or more, are entitled to recommend one patient for every £10 of contribution or £1, 1s. of annual subscription. Public works rank as ordinary subscribers, and are entitled to send one patient annually for every £1, 1s. of annual subscription. Societies and Church congregations subscribing annually are entitled to send two patients for every £3, 3s. of annual subscription. Non-subscribers may get patients admitted on payment of £2, 2s. for each patient. No patients are admitted into the home unless they are in poor circumstances, and considered unable to pay for themselves; and the following cases are not received:—(1) Persons labouring under any acute disease which requires active medical treatment. (2) Persons labouring under or recovering from any contagious disease. (3) Persons labouring under any incurable disease, unless they are likely to benefit from a short residence in the home. (4) Persons who are in a helpless condition. (5) Persons who are not really in a convalescent state; and (6) Persons subject to epileptic or other fits, or who are of unsound mind.

Under ordinary circumstances, the period of the patient's residence is limited to three weeks, though it is in the power of the Visiting Medical Officer to order the period to be restricted or prolonged; but in no case is the time of residence prolonged beyond six weeks in one year, unless specially authorised by the directors.

Mission Coast Home, Saltcoats.—This convalescent home was started in 1866 by Messrs. James Smith, a missionary in Glasgow, and William Bryden, of Saltcoats. They rented a room and kitchen in Saltcoats, and here poor persons in feeble health were received from the closes and wynds of Glasgow. It has grown to be a large institution with 70

beds, and the requisite accommodation of other kinds for the inmates. A medical adviser visits the home. During 1887 the number of persons admitted was 1,115; and the income, which is derived from voluntary contributions, amounted to £1,462, the expenditure being £1,105. The average length of stay is from two to three weeks. Applicants are admitted free if found really necessitous and deserving, those being taken first from the list who are recommended by subscribers, and afterwards those who are recommended by any well known or respectable person.

Kilmun Sea-Side Home. *Office:* 134 Wellington Street, Glasgow.—The "Kilmun Convalescent Home for the Poor" was instituted by the Glasgow Abstainers' Union in 1867. The female missionaries of the Union, in the course of their visits at the homes of the poor, met with many industrious poor people who were utterly unable temporarily to help themselves by reason of infirm health, while all that was needed for recovery or improvement was nourishing food, with fresh air. The idea of the home was thus suggested, and an experiment on a limited scale was attempted, and proved successful. In 1873 the present home at Kilmun, on the Firth of Clyde, was built, with accommodation for 100 patients, and between 1,000 and 1,100 patients annually receive its benefits, poverty and infirmity being the sole qualifications for admission, "subscribers' lines" not being required. While the home is entirely supported by voluntary subscriptions, these subscriptions carry with them no legal claim, being given in the interests of the poor generally, and not on behalf of any prospective individual cases. This leaves the management free to select applicants exclusively on their merits; and preference is given to young and useful lives, and especially to such as are bread-winners, or mothers

with young families dependent on their care. Nourishing diet, fresh air, and pleasant surroundings for a week or two are the only restoratives provided—as cases requiring medical treatment are not eligible—though a doctor visits the home at regular intervals to see that everything is going right. The building and furnishings cost about £3,000, and the home was opened free of debt. Five years ago about £700 was spent on alterations and additionalc onveniences. About £1,200 is annually required for maintenance, management, and upkeep; and it has never suffered for lack of funds. The applicants are required to fill up a schedule, showing their circumstances, and embodying a certificate from a doctor testifying to their ailment, and to their freedom from infectious disease or open sores.

West of Scotland Convalescent Sea-Side Homes, Dunoon. *Office:* 58 George Square, Glasgow.—These homes, instituted in 1869 by Miss Beatrice Clugston, of Glasgow, and a number of gentlemen co-operating with her, are designed for the deserving poor of the industrial classes, for the purpose of affording sea air, bathing, and repose, with ample and excellent nourishment, to invalids, whose circumstances —after confinement in the wards of infirmaries and hospitals, or in the oftentimes prejudicial atmosphere of their own homes—prevent them from regaining, in any other way, the health and strength necessary to resume work. They are situated at Dunoon, on the Firth of Clyde, and there is accommodation for 100 persons. About 3,200 persons are admitted annually, and the yearly expenditure is £5,000, the institution being supported entirely by voluntary contributions. There is one visiting medical officer.

No person is admitted to the homes, unless it can be shown that disease has been so far arrested by previous treatment

as to justify a reasonable belief that health will be established or decidedly improved by change of air and residence at the sea-side.

Only the necessitous are admitted; and admission is obtained through lines of recommendation from donors and annual subscribers. The line of recommendation should be *personally* presented by the convalescent to the medical examining officer, 58 George Square, Glasgow; and, when passed, the applicant lodges the medical certificate and subscriber's line at the office, in order to be booked by the Secretary, who gives the document which procures admission.

For country cases, the line of recommendation should be sent to the Secretary, along with a certificate from the medical attendant of the applicant, giving the name, age, occupation, residence, and nature of the affection under which the person applying has suffered. These documents having been submitted to the medical examining officer, his views and decision are communicated in due course; and, if eligible, a certificate of admission is forwarded, provided there be room in the homes.

The following cases are ineligible:—1. Persons who are helpless, and requiring active medical treatment. 2. Those afflicted with advanced pulmonary consumption, and who are deemed, from that or any other disease, to be incurable. 3. Persons having ulcers, attended with copious or offensive discharges. 4. Convalescents from eruptive or other fevers of an infectious nature, so long as they are deemed capable of communicating infection. 5. All persons subject to epileptic or other fits, or who are of unsound mind. 6. Persons of immoral character, or of intemperate habits.

The time of residence in the homes is limited to two weeks, from 1st May till 31st August; and three weeks' stay, from 1st September till 30th April, in the case of a line from a

subscriber of £1 annually; but it may be extended, by the presentation of an additional line from a subscriber of £2 and upwards yearly.

Every subscriber of £1 annually, or donor of £10 in one sum, has the privilege of recommending one person yearly for admission to the homes, and of an additional recommendation for every additional subscription of £1 or donation of £10.

Congregations, public works, friendly societies, and other united bodies, are entitled to recommend one convalescent for every £1 of annual subscription.

A payment of £1 *may* be accepted—(*but only during December and January*)—from convalescents desiring to be admitted on their own account, and from convalescents sent by those who are non-subscribers.

Cottage Home for Convalescent Children, 10 Glasgow Street, Helensburgh.—This home was started by Mrs. Colville, of Helensburgh, in 1884; and is maintained by voluntary donations and subscriptions. It is intended to provide a few weeks' residence at the sea coast for poor town children, whose health is likely to be benefitted by such a change, and who are not reached by the large convalescent homes, the special feature of this institution being that cases with open wounds, requiring only simple dressings, are admitted. The matron is a trained hospital nurse, and there are ten cots. During last year 149 children were received, and the average length of stay was three weeks. No lines are required; but preference is given to cases recommended by subscribers. Boys between four and ten years, and girls between four and twelve years are eligible; and the suitability of applicants is determined on examination by the medical officer, Dr. Fleming, at his residence, 155 Bath Street, Glasgow.

East-Park Home for Infirm Children, 340 Gairbraid Street, Maryhill Road.—This was instituted in 1874, the need for a home of the kind having been felt after the School Board had completed its first census of the children of school age in Glasgow. Many children, belonging to the poorest class, who had none of the comforts, and few even of the necessaries, of life, were discovered suffering from chronic ailments and deformities, for which no existing institution could properly provide. It was opened for 30 cases, but in 1882, an addition having been made, the number of beds was increased to 50; and now, in 1888, as the applications for admission have become so numerous, a further extension is being built, increasing the beds to 80—40 for boys and 40 for girls.

All cases brought under the notice of the management are visited by the doctor, and those found suitable are placed upon the applicants' roll. When vacancies occur, the more urgent cases are admitted; and the period of residence varies from a few weeks to several years, there being, of course, varying degrees of infirmity, from the children whose cases seem physically hopeless to those who may be restored to moderate health in a few months. The medical officer visits the Home regularly. There is a lady superintendent with a staff of nurses, and a lady teacher gives such instruction as the age and health of the children permit. The institution is supported entirely by voluntary contributions.

Association for the Relief of Incurables for Glasgow and the West of Scotland. *Office:* 119 St. Vincent Street, Glasgow.—This Association was formed in 1875 by Miss Beatrice Clugston, of Glasgow, along with a number of gentlemen. In that year a bazaar was held in the Kibble Crystal Palace, Botanic Gardens, which realised £14,000,

a sum which, before the end of the year, was increased by donations to £24,000. At the outset assistance was given to incurably afflicted persons in their own homes; but with £14,000 of the above sum the estate of Broomhill, Kirkintilloch, about 7 miles to the north-east of Glasgow, was purchased, and the large mansion-house in the attractive grounds, which extended to about 80 acres, was altered and adapted for the purposes of a "home," and opened in 1876 with accommodation for 62 beds. A new wing was built at a cost of £8,000, and opened in 1884; and, altogether, the Home can now accommodate 115 patients, besides matron, 12 nurses, 9 servants, and a male attendant. At the beginning of this year there were 109 inmates, a large number of them being sufferers from paralysis, but including also persons affected with cardiac, brain, and spinal disease, chronic rheumatism, phthisis, scrofula, cancer, epilepsy, general debility, and congenital deformities. The cost per head is about 5s. a week, and the ages vary from childhood to old age. Since it was opened in 1876, 300 cases have been admitted. There are two visiting medical officers, and the annual expenditure is about £3,000.

The object of the institution is the gratuitous relief of deserving persons, not paupers, who have been rendered helpless by disease. Those who are friendless, or who require nursing and medical treatment such as can only be obtained in a public institution, are admitted to the establishment at Broomhill, where, for the remainder of their lives, they have all the comforts of a home. Their religious wants, and the education and training of the young receive careful attention. Applicants are admitted at the discretion of the Directors, if found suitable, after examination by the medical examining officer.

On the recommendation of the out-door relief committee,

persons who appear to be incurably afflicted, but who prefer to remain in their own homes, obtain pecuniary assistance; and there are about 190 such out-door patients, who receive monthly pensions ranging from 6s. to 20s. Since 1876, 669 persons have been relieved in this way, and those in Glasgow who require medical attendance are visited by the senior students in connection with Anderson's College Dispensary, an arrangement which has been carried on since 1879. The amount thus disbursed is about £1,000 per annum, and is distributed by ladies.

The association is supported by voluntary subscriptions and donations, and to some extent by contributions towards the board of in-patients either by themselves or their friends. A Ladies' Auxiliary, started in 1884, also raises over £1,000 a year, chiefly in small sums.

Colquhoun Bequest for Incurables. *Office:* 95 Wellington Street, Glasgow.—This trust was formed in 1874 on the death of Mr. Archibald Colquhoun, of Riddrie Park, its object being the application of the free income of the trust in the relief of poor persons, residing in Glasgow or its immediate neighbourhood, who are afflicted with incurable disease, and so destitute and helpless as to be proper objects of charity. A sum of £20,000 was left for this purpose, and the capital of the trust now amounts to £22,000. The income of the fund is distributed monthly, by 15 lady visitors, to the patients in their own homes; and the total cost of administration is only a little over 2 per cent on the amount distributed. There are 118 persons—40 males and 78 females—in receipt of grants, which range as follows:—5 at 21s. 8d. per month, 101 at 10s. 10d., and 12 at 5s. 5d.; in all, £63, 7s. 6d. per month. Admission to the benefit of the fund is made on the recommendation of any one after

the case has been carefully inquired into by the trustees. The roll is usually full for two years in advance, and at present there are from 70 to 80 applicants thus waiting for admission.

C. F. P.

INSTITUTIONS FOR THE BLIND, AND THE DEAF AND DUMB.

Glasgow Asylum for the Blind, Castle Street.—In the year 1806, John Leitch, of Glasgow, who suffered during the later part of his life from partial blindness, bequeathed the sum of £5,000 to form the nucleus of a fund for establishing an institution for the benefit of blind persons in Glasgow. The citizens supplemented that sum, and an Act of Parliament incorporating the institution was passed in 1825. Suitable grounds and premises were secured on the present site, and in 1827 the Asylum was started.

It was divided into two departments:—(1) A school of instruction for the young, who were lodged in the house; and (2) a school of industry for adults, who were taught a trade, and were afterwards employed in the workshops of the institution. In 1828 eight blind persons were received into the institution, and employed at the manufacture of door-mats, baskets, mattresses, twine, tinned-boxes, and knitting. The sales for that year amounted to £231.

At the present time, nearly 200 blind persons are educated, maintained, and employed in making baskets, brushes, mattresses of all kinds, hassocks, door-mats, cork fenders for ships, nets, sacks, twine, and in spinning, wire-working, knitting, bundling firewood, &c. The sales now amount to nearly £16,000 per annum. The lines originally laid down are adhered to; and the young not only receive a sound

elementary education, aided with all the modern appliances for teaching the blind, but are also taught a trade, whereby they may be able to assist in maintaining themselves. The charge for board, lodging, and education is £12, 12s. a year, and no boy or girl is admitted who is under seven or above fourteen years of age. The period of education is three years, but those who conduct themselves satisfactorily may be allowed to remain longer. Blind children and adults, not inmates, are taught to read on payment of a moderate fee; but, if unable to pay, and properly recommended, they are taught gratuitously. Adults, when openings occur in the workshops, are admitted free of charge, taught a trade, and paid for work done at the regular trade rates. They do not reside in the house, but come to their work daily. Of the non-resident persons receiving the benefits of the institution during 1887, there were 96 men and 16 women employed in the manufacturing department, and 5 children attending the school, while those resident in the Asylum comprised 14 women, 14 girls, and 16 boys. As the board paid for the young is quite inadequate to cover expenses, and the wages paid to the workers are in excess of the amount realised by the sale of their work, these deficiencies and the cost of maintaining the institution are met by public subscriptions, donations, and bequests. During last year, the Asylum provided employment for 129 blind persons, who earned the sum of £2,560 as wages; but in addition to this there was allowed to them the sum of £1,087 as supplement to wages, sick, holiday, and coal allowance, and special grants, the greater number of the recipients being unable to earn sufficient for the support of themselves and those dependent upon them. The ordinary expenditure for the year was £3,478.

About two years ago a disastrous fire destroyed the greater

part of the workshops. The new buildings are now nearly completed, and present a handsome appearance, being also much better adapted for workshops than the old ones. A shop for the sale of the articles made in the Asylum is situated at 82 and 84 Renfield Street.

Glasgow Mission to the Out-Door Blind. *Office:* 4 Bath Street.—The mission to the out-door blind for Glasgow and West of Scotland, which was originated in 1860, is a benevolent society supported by voluntary contributions, and has under its care about 1,250 blind persons. These are sought out, visited regularly at their own homes, taught to read in embossed types, when they desire such instruction, and provided with books on loan, free of charge. There is a well-selected library, containing 2,433 volumes, of which 1,945 are in Moon type, 460 in Braille type, and 28 in Alston type. Means are also used to provide suitable employment for such as are able to work; and assistance is afforded in grants or loans, to enable the recipient to start some simple trade on his own account; or direct aid is given when necessary. In addition to the superintendent, seven missionary teachers are employed; and a ladies' auxiliary, which employs two female teachers, devotes special attention to blind females, visiting them, supplying material for knitting, and disposing of the work. The society encourages the education of blind children in the common public schools along with those who can see; and it has 26 children on its roll, who are all doing well at such schools.

Glasgow Institution for the Deaf and Dumb, Queen's Park.—The Glasgow Society for the Education of the Deaf and Dumb was formed in 1819, and incorporated in the same year by a "seal of cause" from the magistrates of the city.

Before that date, the only school in Scotland where children so afflicted could receive their education was in Edinburgh; but, a committee having been formed, subscriptions to the extent of £2,000 were obtained; a piece of ground in the Barony Glebe, then an airy and agreeable situation, was procured; and commodious buildings provided, together with a large playground and garden.

In 1866, there were 90 pupils; and the institution, by that time, had afforded instruction to 580 children, almost all of whom afterwards maintained themselves by their own exertions. It was then found desirable, however, to have a larger house in a more healthful locality. Two large additions had been made to the original building; but its capacity was becoming every year more inadequate to the number of applicants for admission, its accommodation was deficient, and the situation had become unsuitable.

A new site was secured at Prospect Bank, Queen's Park, overlooking the spot on which the battle of Langside was fought in 1568, and there a handsome edifice was erected, after the plans of Mr. James Salmond, with funds gathered by public subscription. It is a boarding school, with class rooms, dormitories, sitting and dining rooms, playgrounds, gymnasium, and all necessary accommodation for 170 pupils and the official staff.

The charge for board and education is £10 per annum. No boy or girl is admitted before seven years of age or after fourteen, and the applicants must be deaf, of good intellect, and free from infectious disease. When parents are unable to bear the expense, and it cannot be obtained otherwise, the committee admit children gratuitously; and, where a part only of the expense can be borne by the parents or friends, pupils are admitted at reduced rates. A very considerable reduction is thus allowed to the respectable poor; but par-

ochial boards are expected to contribute the full charge. About one-fifth of the children are admitted gratuitously.

The pupils can receive a complete elementary education, and the girls are also taught household duties and needlework. The teaching staff consists of the head master and eight assistant teachers, each of whom has, on an average, about fifteen children in charge. The method of instruction embraces all that is practical in both the German and French systems, lip reading and the sign language being employed. The full curriculum occupies eight years; but the average length of residence is only four years, which is too short to enable the deaf to receive the instruction necessary to enable them to compete with hearing people. An endeavour is made to secure employment in various trades for the pupils, when their education is finished; and some admirable workmen in various occupations in the city were educated in this school. Altogether there have been educated in it 1,089 children. Last year the number of pupils was 143, and the expenditure amounted to £3,900. The income is derived from the charges for board and education, public subscriptions, donations, and bequests, and the interest on investments.

Glasgow Mission to the Deaf and Dumb. *Hall:* 65 Renfrew Street.—This is a Society, established in 1822, the aim of which is to help the adult deaf and dumb of Glasgow and neighbourhood in various ways. The hall is open for religious services in the "Finger and Sign Language" on Sunday, and has a reading-room with lending library attached, and for other purposes during the evening throughout the week. Two courses of lectures are delivered during the year; and, when the lecturers are not deaf and dumb, the addresses are interpreted by the missionary employed by the Society. When necessary, the persons on the roll are visited

at their own homes, and temporary relief is granted in cases found to be really deserving. Others are assisted in obtaining employment. To be deaf and dumb entitles any applicant to the aid of the Society. There is a Temperance Society in connection with the mission; and the services of an interpreter are available for any one, being usually called for on such occasions as marriages, baptisms, funerals, and court cases. The Society is supported by voluntary contributions.

C. F. P.

INSTITUTIONS FOR THE TRAINING OF NURSES.

Glasgow Training Home for Nurses, 250 Renfrew Street.—This institution was founded by Miss M'Alpin, of Glasgow, along with a committee of ladies and gentlemen. Its objects are—(1) To train women of high character for the work of nursing the sick, and to employ them in the Home or in private families; (2) to provide premises for the staff, and also for the purposes of a private hospital. In 1874, temporary premises were opened at 98 St. George's Road, and there the work of the institution was conducted till 1880. To afford the requisite practical experience, a few patients were received into the home, some of whom were gratuitously nursed, while others were admitted at a very low charge. By and bye, as the number of nurses increased and the nature of the institution became better known, there was less difficulty in obtaining patients who were both able and willing to pay for the benefits conferred; and ultimately the directors were forced to consider the propriety of making arrangements for providing private

apartments for young men and women living in lodgings who might be overtaken with illness; for persons who, when laid aside with sickness, might not have the advantage of relatives to look after their household affairs; and for patients from the country who might wish to be for a time under the care of a city physician or surgeon. Three rooms were set apart for the reception of patients, who, on payment of a graduated scale of charges, could be nursed in the institution, and be visited either by the doctors in attendance or by their own medical advisers, thus accommodating 15 patients in the private rooms and general wards, 10 nurses, and the lady superintendent and an assistant.

In 1878 the directors purchased, at a cost of £3,500, a property situated at 250 Renfrew Street; and the premises, when opened in 1880, provided suitable accommodation for the ladies in charge and for 20 nurses, 7 rooms for private patients, 2 wards with beds for 10 patients, a waiting room, an operating room, and other necessary conveniences. The alterations and extensions cost about £3,200. The adjoining property was acquired in 1883, at the price of £2,200; and the new part opened in 1884, the alterations and additions involving an outlay of about £1,400.

The institution now contains accommodation for 33 nurses, 10 rooms for private patients, 1 female ward for 5 adult patients and a child's crib, and 1 male ward for 4 adult patients and a child's crib.

Persons suffering from infectious disorders are not admitted into the home, but other patients can receive board, lodging, and nursing in the general wards on payment of from 7s. 6d. to 10s. per week, or in private rooms on payment of from £2, 2s. to £3, 3s. per week. They may be attended by their own medical adviser, whose fees are a separate charge, of which the directors take no cognisance; but, when patients

have no doctor of their own, they are under the care of the two visiting medical officers of the institution, who give their services gratuitously, and the above rates include this medical attendance.

The charge for a nurse in ordinary medical cases in private families is £1, 5s. per week, in addition to board, lodging, washing, and travelling expenses. For surgical, midwifery, and infectious cases the charge is £1, 10s. per week, and in the last class an additional sum of £1, 1s. is charged to provide the nurse with a lodging for a short time before returning to the institution.

No applicant under five-and-twenty or over forty years of age is admitted into the institution for the purpose of being trained as a nurse, and each applicant received remains for one month on trial. If found suitable, she becomes bound to remain in the institution for a period of three years and a-half from the date of her entering it, undergoing the training necessary to qualify her as a nurse. During the first six months she receives board, lodging, and washing, but no wages. On the expiry of that period, and during the ensuing three years, she, in addition to board, lodging, and washing, receives an allowance at the rate of not less than £14 for the first year, £17 for the second year, and £20 for the last year of her engagement. Each nurse resides in the institution when not engaged in private families. Of 288 applicants since the institution was started, 167 proved unsuitable on probation, and 121 have been trained in the home in ordinary medical and surgical cases, and as ladies' nurses. They are not sent out to private families till they have served for one year in the home; and, out of a staff of 72, 54 are so qualified.

Until last year the institution was partially supported by public subscriptions and donations, but now money received

from such sources is carried to the building fund to reduce the debt, the fees received from private and in-door patients meeting the expenditure. In 1887, with a staff of 55 trained nurses, 448 cases in private families were attended, from which a sum of nearly £3,100 was received; and 216 cases were admitted, from which a sum of £900 was received.

Glasgow Sick Poor and Private Nursing Association. *Home:* 220 Sauchiehall Street.—The objects of this Association are:—

1. To provide trained and experienced women of high character to attend the sick poor in their own homes, and midwifery nurses to attend the very poor gratuitously, and the working classes at a moderate fee.

2. To provide thoroughly qualified nurses for private families who are able to pay for their services.

3. To improve the moral and professional qualifications of nurses for the sick among the poor and in private families, by providing them with training in the wards of an hospital, with the regulations and comforts of a home in charge of a lady superintendent.

The work of the institution was originated by the superintendent-general, Mrs. James S. Higginbotham, about the year 1875, and was at first carried on by her with the financial help of a few personal friends, the staff then consisting of one nurse and one probationer. The staff is now composed of nurses trained at other institutions, and also probationers of this Association trained at the Glasgow Royal Infirmary, the City of Glasgow Fever Hospital, and elsewhere; and it consists of 70 nurses, including trained nurses, probationers, and assistants. At the close of last year there were 64 trained nurses and probationers; and of these 14 were district nurses, 6 midwives, 35 private

nurses, and 9 probationers, these last being in training for six months at the Royal Infirmary, and a similar period at the Fever Hospital. In addition there were 8 assistant nurses, constantly employed as night nurses to the sick poor, where the cases required continuous attention.

The salary of the nurses commences at the rate of £25 per annum, rising £1 per annum to £40, with board, lodging, and uniform. The probationers receive £10 for the first year, with a gift of £3 at the end of the year should they bring good recommendations from the hospitals where they have been trained; and during the second and third years they receive £20, after which they receive £25, rising £1 per annum to £40. They also receive a certificate from the Association.

The number of cases treated during last year was 1,477 in the district work and 431 in private families. The terms for private nursing are £1, 10s. per week for ordinary cases, and £2, 2s. per week for midwifery cases; £1 is charged in fever cases for a nurse's disinfecting fee.

The ordinary revenue for the year ending October, 1887, was £3,488, and of this the sum of £2,667 was derived from nursing fees. Public subscriptions amounted to £798, and donations to the extent of £1,276, in response to a special appeal, along with legacies, brought up the total income to £5,142.

The work among the poor is distributed over fourteen districts; and the nurses, who live in the home of the Association, are engaged on their districts from 10 A.M. till 5 P.M., during which time a very large number of visits are made. The nurse carries a basket containing dressings, lotions, and other articles required for her work; and, in addition to the actual attention which the patient receives, the Association frequently supplies, in cases of great desti-

tution, food, clothing, and lines for admission to the infirmaries or convalescent homes. Persons desiring the aid of the Association can obtain it by applying at the home from 9 to 11 A.M., when arrangements are made for the nurse of the district to call; poverty and physical suffering are the only qualifications necessary to command the assistance of the Association. Notes are kept of all the cases visited; and, when necessary, medical aid is supplied gratuitously by members of the profession, who have always shown the greatest willingness to assist the nurses. Another part of the district work is carried on by the midwives, who are at the service of the poor at all hours of the day or night; they are trained at the Glasgow Lying-in Hospital.

C. F. P.

Medical Societies and Journals.

—o—

MEDICAL SOCIETIES.

Glasgow Medico-Chirurgical Society.—This society was started in 1844, and its objects are to receive communications on medicine, surgery, and the collateral sciences; to converse on medical topics; and to promote professional improvement by any means that may from time to time be approved of. It originally met in the hall of the Faculty of Physicians and Surgeons, which was then in St. Enoch's Square; and when this was changed to St. Vincent Street, in 1862, the society migrated thither also. The members were admitted by ballot, and an annual contribution of 5s. was payable, attendance at the meetings and the reading of papers being entirely voluntary and there being no fines. The meetings were held on the second Tuesday of each month, commencing in March and ending in October.

By mutual agreement, in 1866, it was amalgamated with the older "Glasgow Medical Society." This society had been instituted in 1814, and during the first eighteen months of its existence the members met on the first and third Tuesday of each month; but after that time the meetings were held on the same days throughout the winter session only, commencing in October and ending in May. The place of meeting

was the hall of the Faculty of Physicians and Surgeons, and this privilege was accorded by the Faculty throughout the entire period of the existence of the society. The members were elected by ballot, and paid an entrance fee of one guinea, which constituted life membership. From the commencement, a rigorous system of fines was enforced, with a view to secure regular and punctual attendance at the meetings, the reading of essays or written communications by the members in rotation, funds for necessary expenses, and a strict observance of all the rules of the society; and this system was continued till the year 1846, when fines, compulsory attendance, and compulsory reading of papers were abolished; and the funds of the society were provided by a payment of 5s. as entry money, and a contribution of 5s. each succeeding session. During an early period of the history of this society, lists of the deaths in Glasgow and a register of the weather, during the three preceding months, were presented at a quarterly meeting by a committee specially appointed for the purpose; and at this meeting the prevailing diseases were discussed. This arrangement, however, was soon changed, and the meeting on the first Tuesday of each month was reserved for the consideration of the papers read by the members in rotation, the meeting on the third Tuesday being reserved for "professional conversation"—*i. e.*, discussions of the prevailing diseases, of interesting cases, and of other professional topics brought forward without previous announcement.

In 1886 four sections were formed—viz., Medicine, Surgery, Midwifery and Gynæcology, and Pathology; and some changes were made in the constitution of the Society. The rules regarding membership remain as above, and the ordinary meetings are held at 8·30 P.M. on the first Friday of each month, commencing in October and ending in May, extra

meetings being held on other Fridays as often as it is considered advisable. Reports of the proceedings are published in the *Glasgow Medical Journal* and elsewhere.

There are 245 ordinary and 8 corresponding members, admission being by ballot; and during last session (1887-88) there were 70 contributions, including papers, cases, pathological preparations, and microscopical demonstrations, given by 39 members. Of these contributions 14 were in the section for medicine, 23 in that for surgery, 28 in that for pathology, and 5 in that for obstetrics. Twenty-five meetings were held, and a very successful conversazione took place.

Glasgow Southern Medical Society. — This Society, instituted in 1844, had its origin in that part of the city which lies on the south side of the River Clyde, but its membership is open, subject to ballot, to all qualified practitioners residing in or near Glasgow. The meetings, which are held every alternate Thursday, from October to May inclusive, at 8·30 P.M., in the rooms of the Society, 11 Bridge Street, are devoted to the reading and discussion of papers, exhibition of specimens, and professional conversations, reports of the transactions being published from time to time in the *Glasgow Medical Journal* and other periodicals. The annual contribution is five shillings. The Society endeavours to maintain the rights of its members and of the profession generally, and in 1853 adopted the "Code of Ethics" of the American Medical Association, which it has republished together with a tariff of fees. Its membership numbers 153; and during last session there were 17 meetings, including an annual dinner and a picnic. The number of communications was 21, brought forward by 16 contributors.

Glasgow Pathological and Clinical Society.—This Society was started as a Pathological Society in 1873, the aim being to have a limited number of working members meeting for the exhibition and study of patients, preparations, drawings, and instruments. It met at first in the Lying-in Hospital, 112 Wellington Street; but at the beginning of the second session, at which period a clinical element was introduced or more distinctly recognised, the Society assumed its present name, and the place of meeting was changed to the Eye Infirmary, Berkeley Street. At the beginning of the fourth session, there was a further removal to the hall of the Faculty of Physicians and Surgeons, St. Vincent Street, where the meetings have since been held. From the outset it was arranged that adequate reports of the proceedings would be published, and insertion of them was obtained in the *Glasgow Medical Journal* and the *British Medical Journal.* Originally the membership was limited to 30, and a fine of 5s. was exacted from any member who was absent from three consecutive meetings; but fines are now abolished, and the number of members is increased to 40. New members are admitted by ballot as vacancies occur, and are required to produce some communication before nomination. The regular meetings are held at 8 p.m. on the second Tuesday of each month from October to May, inclusive. During last session there were nine meetings, at which 16 contributors brought forward 47 communications, including papers, patients, specimens, microscopical preparations, and instruments.

In 1879 a discussion on Internal Aneurism took place in connection with this Society, and three other such discussions have been carried out with advantage at later dates, speakers coming from a distance to share in the proceedings. The subject in 1881 was Phthisis Pulmonalis,

in 1884 Albuminuria, and in 1886 Cancer; and full reports of the debates have been issued as separate publications. The Society has also published two volumes of Transactions, one for 1883-84 and another for 1884-86.

Glasgow Obstetrical and Gynæcological Society.—This Society was instituted in 1885 for the promotion of science and art in connection with midwifery and the diseases of women and children. There are 85 fellows, and the meetings are held in the hall of the Faculty of Physicians and Surgeons, St. Vincent Street, on the fourth Wednesday of each month from October to June, inclusive, at 8·30 P.M. Candidates are admitted by ballot, and the annual subscription is 5s. During last session seven meetings were held, at which 16 communications were brought forward by ten members.

The Glasgow and West of Scotland Branch of the British Medical Association.—On the 30th November, 1875, a meeting of medical gentlemen, practising in and around Glasgow, composed for the most part of those who were members of the British Medical Association, was called by circular, the purport of the meeting being the formation of a Branch of the Association. The meeing was held in the Faculty Hall, and Dr., now Sir George, Macleod was called to the chair.

Dr. Joseph Coats stated that there were 86 members of the Association in Glasgow, and neighbourhood; and 75 in the counties of Lanark, Ayr, Renfrew, Dumbarton, and Argyle. After fully discussing the question, it was resolved, on the motion of Dr. James Morton seconded by Dr. T. M'Call Anderson, that a Branch of the British Medical Association, to be called the Glasgow and West of Scotland Branch, be formed. A provisional committee was appointed, consisting

of the following gentlemen—viz., Dr. George H. B. Macleod, Dr. Joseph Coats, Dr. T. M'Call Anderson, Dr. James Morton, Dr. W. T. Gairdner, Dr. J. G. Lyon, Dr. Hugh Thomson, Mr. W. L. Muir, Surgeon, all of Glasgow; Dr. John Strachan, Dollar; Dr. Bruce Goff, and Dr. Dean Fairless, Bothwell; Dr. G. H. B. Macleod, convener.

On 18th January, 1876, a general meeting was held, at which laws for the regulation of the Branch were framed, and the following office-bearers were appointed—viz., *President*, Dr. Allen Thomson; *President-elect*, Dr. G. H. B. Macleod; *Vice-Presidents*, Dr. James Grieve, Port-Glasgow; Dr. D. Fraser, Paisley; *Honorary Secretaries*, Dr. Joseph Coats and Dr. J. G. Lyon; *Members of Council*, Dr. W. T. Gairdner, Dr. T. M'Call Anderson, Dr. James Morton, Dr. Andrew Fergus, Glasgow Members; and Dr. Donald Macleod, Kilmarnock; Dr. James Cuthill, Denny; Dr. A. Stewart, Greenock, and Dr. Steven, Ardrossan, country members.

At first, the Branch met annually; but now it meets twice a year, the winter meeting being held in Glasgow and the summer meeting in a selected country district.

At the general meeting of the Branch, held on 26th June, 1884, it was moved that "the Branch approves of an invitation being sent to the Association to hold their annual meeting in Glasgow at an early date," but it was not till December of that year that the motion was adopted. The Branch, of course, could not invite the Association; but an influential and representative committee was suggested to carry out the proposed invitation. The Branch now numbers 186 members, the annual subscription being 2s. 6d.

The Western Medical Club.—Under the above title a social gathering of medical men occurs twice a year. The following sentences, which constitute the first entry in the

minute book of the club, sufficiently indicate its mode of origin:—"On 25th July, 1845, by previous arrangement, the following gentlemen, members of the medical profession resident in Glasgow, met at dinner at Bell's Inn, Bowling—viz., Dr. A. D. Anderson, Dr. William Weir, Dr. John Macfarlane, Dr. Robert Perry, Mr. George Watson, Dr. David Gibson, Dr. J. G. Fleming, Mr. William Lyon, Dr. Alex. Maclaverty, Dr. A. M. Adams, and Dr. Andrew Anderson. In the course of the evening, which was spent with great hilarity, it was agreed to institute a club, with the object of promoting friendly and social intercourse among the members of the medical profession in Glasgow and the West of Scotland." Shortly afterwards the club was duly constituted, and its first dinner was held in the Black Bull Hotel, Glasgow, on 30th January, 1846, under the presidency of Dr. Robert Perry. The club now consists of 60 members, 30 of these being town and 30 country members, admission being by ballot as vacancies occur. They dine together twice a year, in January and June, the winter dinner being held in Glasgow under the presidency of a town member, and the summer meeting being in the country—often somewhere in the neighbourhood of the residence of the particular country member who has been selected to preside. Frequently, however, a steamer is chartered for the day on Loch Lomond or the Firth of Clyde, and, after an hour or two of cruising, dinner is purveyed on board. If a member is absent from a meeting without giving notice to the secretary before a certain day, he incurs a fine, and these fines, along with the entry-money of new members, and the annual subscriptions of all members, constitute the funds of the club. If absent from four meetings (*i.e.*, for two years), a member ceases to be one of the club. The price of the dinner ticket for each member is

only half of what the club pays the purveyor, the difference being defrayed from the funds; and the chairman is allowed to entertain two guests at the expense of the club, while any member may entertain one guest, who is a medical man but not practising within the municipality of Glasgow. Numerous guests enjoy the hospitality of the club.

C. F. P.

"THE GLASGOW MEDICAL JOURNAL."

THIS journal was started in February, 1828, under the editorship of Dr. William Mackenzie, whose name is identified with ophthalmic surgery and with the Eye Infirmary of Glasgow. It was published quarterly under his editorship, and he continued in office for two years. The third annual volume was edited by Dr. William Weir, who was till lately a venerable figure amongst the Glasgow profession. In the fourth year Dr. Weir associated with himself Dr. Andrew Buchanan, and in the fifth and sixth years Dr. James Adair Lawrie.

The *Journal* was thus published quarterly during a period of six years—namely, from 1828 till 1833, both years inclusive.

It now ceased to exist, and was not revived for 20 years. In the year 1853 it was resuscitated, and we find Dr. William Weir again appearing in the editorial chair, now associated with Dr. James Steven. These two carried on the *Journal* as a quarterly for three years.

It then passed into the hands of Dr. George Buchanan and Dr. John B. Cowan, who edited it for two years—namely, in 1856 and 1857. For the following three years these gentlemen were associated with Dr. James M'Ghie,

Superintendent of the Royal Infirmary, as editors. This carries us down to the year 1860.

In the year 1861 the editors were Dr. Joseph Bell and Dr. William Leishman, and they edited two volumes. Dr. Leishman was left alone in the editorship in 1863, and in 1864 he associated with himself Dr. P. A. Simpson. In the following year Dr. P. A. Simpson was the sole editor.

The *Journal* had now been published quarterly for a continuous period of 13 years, and it was thought that it might succeed as a monthly. In May, 1866, it came out as a monthly, under the editorship of Dr. P. A. Simpson, but it only continued for two years in this form.

In the year 1868 it seemed as if the *Journal* might become extinct; but, as such an event was regarded by many in the light of a serious calamity, there was a vigorous movement in the profession to do something to put it on a permanent basis. The result was that all who undertook to become subscribers to the *Journal* banded themselves together into the "Glasgow and West of Scotland Medical Association," whose principal object was "the promotion of medical science by the publication of a journal, to be called the *Glasgow Medical Journal.*" In order to ensure its success, a number of leading men subscribed to a guarantee fund, which was to continue for five years. The *Journal* still exists under this Association, and it is satisfactory that the guarantee fund was never called up.

The first editor under this new arrangement was Dr. J. B. Russell, now the medical officer of health for the city of Glasgow, and the *Journal* was published quarterly under his editorship for six years. In the year 1875 Mr. Henry E. Clark was appointed editor, and he carried on the *Journal* for three years. At the end of that period he was succeeded by Dr. Joseph Coats.

The *Journal*, except for two years, had hitherto been a quarterly. It now, by the decision of the Association, began its career as a monthly, and so it has continued. During the first year of the monthly issue—namely, in 1878—each number consisted of 48 pages, making the total yearly volume the same as formerly, when it was issued quarterly. At the end of the first year, on the suggestion of the editor, the *Journal* was enlarged to 80 pages, so as to make two volumes in the year. In the year 1882 the editor asked the Association to appoint Dr. Alexander Napier as co-editor, and the *Journal* has since then been carried on under the joint editorship of Dr. Joseph Coats and Dr. Alexander Napier.

In its present form the *Journal* consists of the following departments:—I, Original Articles; II, Current Topics, in which the principal local medical events are discussed; III, Reviews; IV, Meetings of Societies. This has greatly expanded of late, so that sometimes as much as 40 pages are occupied in the monthly issue. V, Abstracts from Current Medical Literature. This department is worked by a large staff of collaborateurs, who contribute every month condensed notes of important articles in their various departments.

The monthly issue of the *Journal* consists of at least 80 pages, but of late it has frequently been 88 or 96 pages; and the price is 20s. per annum.

J. C.

"THE SANITARY JOURNAL."

In December, 1874, Mr. John Welsh, Superintendent of Police and Sanitary Inspector, Perth, invited a few of his brother inspectors to form an Association of Sanitary Inspectors.

A meeting was subsequently held at Stirling, on the 20th January, 1875. Among other things in the circular calling the meeting, it was said:—"The chief objects of the Association will be the mutual consideration of subjects connected with sanitary matters; the diffusion of information which will lead to an increased knowledge of the laws of health, and sanitary science generally; the establishing of a proper system of co-operation and communication between sanitary inspectors throughout Scotland, and the affording of aid to each other in all matters pertaining to the discharge of their duties."

At this meeting, the Association was formed, and the late Mr. Kenneth Macleod, Sanitary Inspector of Glasgow, was elected as President, and a committee of management was appointed to make arrangements for the first annual meeting to be held at Stirling, in June, 1875.

This committee, after carefully considering the best means for disseminating sanitary knowledge, and otherwise carrying out the objects of the Association, resolved that this would be best effected by the publication of a monthly journal. The recommendation of the committee was adopted at the first annual meeting of the Association; and full powers were conferred on the committee of management to carry it out with the least possible delay.

The first number of the *Sanitary Journal* appeared on the 1st March, 1876, under the editorship of Dr. John Dougall, Medical Officer of Health, Kinning Park, Glasgow, who occupied the editorial chair for three months. Dr. Dougall having resigned office, the infant Journal was committed to the care of the present editor, Dr. James Christie, who has occupied the post since June, 1876.

The *Sanitary Journal*, like all other pioneer journals, had its early difficulties and struggles for existence. At the

early age of two years, its life seemed to be fast ebbing away, death from inanition being imminent. The Association was then composed solely of Sanitary Inspectors, whose emoluments as such, did not, with a few exceptions, amount to more than ten pounds per annum ; so that it could scarcely be expected that the members of the Association could continue their responsibility in connection with the *Journal*, in the face of an increasing debt. It appeared, therefore, that both the Association and the *Journal* were doomed.

In 1878, the present editor took upon himself the entire responsibility; the scope of the Association was enlarged, all those interested in sanitary science being admitted as members; and a new series of the *Journal* in a less expensive form was issued. Through the influence of Dr. J. B. Russell, Medical Officer of Health for Glasgow, and Ex-Lord Provost Ure, the Town Council of Glasgow became subscribers, several other Local Authorities following suit; and to these gentlemen the credit is due of having preserved the life of an Association which is now a power in Scotland, as regards sanitary matters, and of the *Journal* which represents it. The annual subscription for the *Journal* is 6s., and for membership of the Association, 2s. 6d.

J. C.

Medical Staff of the Institutions.

—o—

The University of Glasgow.—*Professors*—*Practice of Medicine*, W. T. Gairdner; *Natural History*, J. Young; *Midwifery*, W. Leishman; *Surgery*, Sir G. H. B. Macleod; *Forensic Medicine*, P. A. Simpson; *Clinical Surgery*, G. Buchanan; *Clinical Medicine*, T. M'Call Anderson; *Chemistry*, J. Ferguson; *Institutes of Medicine*, J. G. M'Kendrick; *Anatomy*, J. Cleland; *Materia Medica*, M. Charteris; *Botany*, F. O. Bower. *Lecturers*—*Waltonian Lecturer*, T. Reid; *Insanity*, D. Yellowlees. *Assistants to Professors*—*Anatomy*, J. Y. Mackay, R. B. Young, J. A. Adams, A. M. Ramsay; *Chemistry*, J. Hutcheson, G. G. Henderson; *Botany*, A. White; *Materia Medica*, A. Napier; *Forensic Medicine*, D. Munro; *Institutes of Medicine*, J. M'Gregor Robertson; *Surgery*, G. Beatson; *Natural History*, J. H. Fullarton; *Midwifery*, M. Cameron; *Clinical Surgery*, J. C. Renton; *Clinical Medicine*, W. G. Dun, J. L. Steven; *Muirhead Demonstrator of Physiology*, W. Snodgrass.

Faculty of Physicians and Surgeons.—*President*, J. Morton; *Visitor*, A. Robertson; *Councillors*, President, Visitor, Treasurer, *ex officio*, H. C. Cameron (as Representative to the General Medical Council), R. Perry, T. Lapraik, J. Dunlop, T. M'Call Anderson, R. Renfrew, H. E. Clark; *Treasurer*, J. D. Maclaren; *Hon. Librarian*, J. Finlayson; *Vaccinator*, H. Thomson.

Anderson's College Medical School.—*Professors*—*Anatomy*, A. M. Buchanan; *Chemistry*, W. Dittmar; *Physiology*, J. Christie; *Surgery*, J. Dunlop; *Practice of Medicine*, S. Gemmell; *Materia Medica*, J. Morton; *Midwifery*, A. Wallace; *Medical Jurisprudence*, E. Duncan; *Botany*, A. S. Wilson. *Lecturers*—*Hygiene and Public Health*, J. Christie; *Ophthalmic Medicine and Surgery*, J. R. Wolfe; *Aural Surgery*, T. Barr.

Western Medical School.—*Lecturers*—*Anatomy*, T. K. Dalziel; *Surgery and Operative Surgery*, D. N. Knox; *Medicine*, D. C. M'Vail; *Midwifery and Gynæcology*, W. L. Reid; *Diseases of Eye*, A. F. Fergus; *Diseases of Ear, Throat, and Nose*, J. W. Downie; *Diseases of Skin*, H. Murray.

Royal Infirmary School of Medicine.—*Lecturers—Anatomy*, H. E. Clark (J. Macintyre, *Demonstrator*); *Chemistry*, J. M. Milne; *Physiology*, J. Barlow; *Surgery*, W. Macewen; *Practice of Medicine*, J. W. Anderson; *Materia Medica*, J. Dougall; *Medical Jurisprudence*, J. Glaister; *Midwifery*, J. Stirton; *Pathology*, D. Newman; *Mental Diseases*, A. Robertson; *Aural Surgery*, Johnstone Macfie; *Dental Surgery*, J. C. Woodburn; *Diseases of Eye*, H. E. Clark; *Diseases of Throat and Nose*, D. Newman; *Public Health*, J. Glaister.

Royal Infirmary.—*Physicians*, A. Wood Smith, A. Robertson, J. Wallace Anderson, S. Gemmell; *Physician for Diseases of Women*, J. Stirton; *Surgeons*, J. Dunlop, H. E. Clark, J. A. Lothian, D. N. Knox, W. J. Fleming, W. Macewen; *Aural Surgeon*, Johnstone Macfie; *Dental Surgeon*, J. C. Woodburn; *Assistant Physicians*, J. Dougall, G. S. Middleton, T. B. Henderson, D. Campbell Black, A. Macphee, J. L. Steven; *Assistant Surgeons*, J. Barlow, J. A. Adams, W. Muir, W. J. Shaw, J. Whitson, J. Macintyre; *Surgeon for Diseases of Throat*, D. Newman; *Surgeon for Diseases of Skin*, J. Provan; *Surgeon for Diseases of Eye*, A. Freeland Fergus; *Curator of Museum*, D. Newman; *Electrician*, J. Macintyre; *Vaccinator*, H. Thomson; *Superintendent*, M. Thomas.

Western Infirmary.—*Visiting Physicians*, W. T. Gairdner, T. M'Call Anderson, J. Finlayson, G. P. Tennent; *Visiting Surgeons*, Sir G. H. B. Macleod, G. Buchanan, A. Patterson, H. C. Cameron; *Physician for Diseases of Women and Consulting Physician-Accoucheur*, W. Leishman; *Assistant Physicians*, J. Coats, J. Christie, D. C. M'Vail; *Dispensary Physicians*, J. Alexander, W. G. Dun, R. S. Thomson, G. Dickson, C. O. Hawthorne; *Dispensary Surgeons*, J. C. Renton, G. T. Beatson, D. Newman; *Extra Dispensary Surgeons*, A. E. Maylard, J. Parker; *Dispensary Physicians for Diseases of Women*, W. L. Reid, R. Kirk, M. Cameron; *Dispensary Surgeon for Diseases of the Ear*, T. Barr; *Honorary Consulting Ophthalmic Surgeon*, T. Reid; *Pathologist*, J. Coats; *Vaccinator*, D. C. M'Vail; *Dental Surgeon*, W. D. Woodburn; *Superintendent*, A. W. Russell.

Sick Children's Hospital.—*Physicians*, J. Finlayson, S. Gemmell; *Surgeons*, H. C. Cameron, W. Macewen; *Extra Physicians*, G. S. Middleton, R. S. Thomson, J. L. Steven, C. Workman; *Extra Surgeons*, W. J. Fleming, A. E. Maylard, T. K. Dalziel, Q. M'Lennan; *Pathologist*, J. Coats; *Oculist*, T. Reid; *Aurist*, T. Barr; *Dentist*, Rees Price.

Glasgow Royal Asylum, Gartnavel.—*Medical Superintendent*, D. Yellowlees; *Assistant Physicians*, J. Hay, J. Parker; *Consulting Surgeon*, H. C. Cameron.

Barony Parochial Asylum, Woodilee.—*Medical Superintendent*, R. Blair; *Assistant Physician*, T. Rutherford.

City Parochial Asylum.—*Consulting Physician*, A. Robertson; *Medical Superintendent*, G. Buchan; *Assistant Physician*, H. Mechan.

Govan Parochial Asylum, Merryflatts.—*Medical Superintendent*, W. R. Watson; *Assistant Physician*, G. Davidson.

Glasgow District Asylum, Bothwell.—*Medical Superintendent*, A. C. Clark.

Town's Hospital. — *Consulting Physician*, A. Robertson; *Medical Superintendent*, G. Buchan; *Assistant Physician*, H. Mechan.

Barony Parish (Barnhill Hospital).—*Medical Superintendent*, W. Core; *Assistant Physician*, A. M'Arthur. *District Surgeons—Calton and Bridgeton*, A. M. Murdoch; *Camlachie*, D. Couper; *Parkhead*, W. Young; *Springburn and Possilpark*, J. A. Smith; *Maryhill*, A. Hay; *Woodside and Keppoch*, D. Maclean; *Finnieston*, J. Carswell; *Anderston*, G. Halket; *Cowcaddens*, D. Cowie.

Govan Combination Parish (Merryflatts Hospital). — *Medical Superintendent*, W. R. Watson; *Assistant Physician*, G. Davidson. *District Surgeons—Eastern*, J. V. Wallace; *Central*, J. Barrie; *Western*, R. D. Taylor; *Govan*, J. Barras; *Partick*, G. Campbell.

Fever and Small-pox Hospitals, Belvidere.—*Physician-Superintendent*, J. W. Allan; *Senior Assistant Physician*, A. Jack; *Assistant Physician*, D. J. Macintosh; *Extra Assistant Physician*, W. W. Christie.

Joint Hospital, Knightswood.—*Medical Superintendent*, I. Clerk.

Combination Hospital, Govan.—*Medical Superintendent*, W. Allan.

Lying-in Hospital.—*Consulting Surgeon*, G. Buchanan; *Senior Consulting Physician*, W. Leishman; *Consulting Physician*, S. Sloan; *Obstetric Physicians*, W. L. Reid, M. Cameron; *Assistant Obstetric Physicians*, A. Sloan, E. H. L. Oliphant; *Pathologists*, D. Newman, T. K. Dalziel; *Out-door Accoucheurs*, J. Dunlop, T. F. Gilmour, M. Black, J. Ritchie, A. Jamieson, J. Conway.

Eye Infirmary.—*Consulting Surgeon*, G. Buchanan; *Senior Surgeon*, T. Reid; *Surgeons*, T. S. Meighan, H. E. Clark, J. C. Renton; *Assistant Surgeons*, D. N. Knox, A. F. Fergus, A. M. Ramsay.

Ophthalmic Institution.—*Consulting Physician*, S. J. Moore; *Acting Surgeon*, J. R. Wolfe; *Acting Physician*, J. S. Cumming; *Assistant Surgeons*, J. M'Gregor Robertson, A. T. Thomson.

Ear Hospital.—*Aural Surgeon*, T. Barr; *Assistant Surgeons*, F. V. Adams, S. G. Campbell; *Dental Surgeon*, Rees Price; *Senior Consulting Physician*, W. T. Gairdner; *Senior Consulting Surgeon*, J. Morton; *Consulting Dental Surgeon*, J. C. Woodburn; *Pathologist*, J. Coats; *Consulting Ophthalmic Surgeon*, T. Reid; *Consulting Throat Surgeon*, A. Mechan.

Lock Hospital.—*Surgeons*, J. Dunlop, A. Patterson.

Dispensary for Skin Diseases.—*Physician*, T. M'Call Anderson.

Dispensary for Diseases of Chest and Throat.—*Chest*, P. A. Simpson; *Throat*, J. Macintyre.

Medical Mission.—*Medical Superintendents*, A. Templeton, G. M. Connor; *Assistant Physician*, R. W. Bruce.

Hospital for Diseases of Women.—*Physicians*, R. Bell, G. R. Allan; *Assistant Physician*, H. G. Wilson.

Public Dispensary.—*Consulting Surgeon*, G. Buchanan; *Consulting Physician*, J. B. Cowan; *Throat and Chest*, D. Maclean; *Skin and Ear*, A. D. Stewart; *Kidney and Urinary Organs*, D. Campbell Black; *Women and Children*, A. Macphee.

Anderson's College Dispensary.—*Surgeons*, Q. M'Lennan, C. W. Stewart, R. Pollok, J. Conway, S. G. Campbell, J. N. Stark, P. F. Shaw; *Physicians*, A. Clerk, A. D. Moffat, W. Jeffrey, R. Macpherson, J. Hutchison, J. Brown, J. Kennedy; *Physicians for Diseases of Women and Children*, A. Wallace, A. Sloan, G. A. Turner; *Physicians for Diseases of the Skin*, A. Napier, D. Couper; *Surgeon for Diseases of the Eye*, C. F. Pollock; *Surgeon for Diseases of the Ear*, J. Erskine; *Surgeons for Diseases of the Throat*, J. Macintyre, J. W. Downie; *Superintendent of Out-door Visiting Department*, E. Coyle.

Dental Hospital.—*Consulting Physician*, W. T. Gairdner; *Consulting Surgeon*, Sir G. H. B. Macleod; *Dental Surgeons*, J. A. Biggs, W. S. Woodburn, Rees Price, J. Cumming, J. R. Brownlie, J. C. Woodburn; *Assistant Dental Surgeons*, A. B. Young, W. F. Martin, J. M. M'Cash, W. M. Adamson, O. Fergus, J. Cameron; *Administrators of Anæsthetics*, J. Brown, A. Mechan, J. Wyllie.

Polyklinik.—*Physician for Diseases of Women*, W. L. Reid; *Surgeon for Diseases of Ear, Throat, and Nose*, J. W. Downie; *Surgeon for Diseases of Eye*, A. M. Ramsay; *Physician for Diseases of Skin*, A. Napier; *Physician for Diseases of Nervous System*, C. Workman; *Physician for Diseases of Genito-Urinary Organs*, H. Rutherford.

Samaritan Hospital for Women.—*Consulting Physician*, J. Morton; *Physicians*, R. Park, G. Halket; *Surgeon*, J. S. Nairne; *Assistant Physician*, J. Hamilton.

Ear Institution.—*Aural Surgeons*, J. Erskine, R. A. D. Robb.

Cancer and Skin Institution.—*Consulting Surgeons*, H. E. Clark, J. Barlow, J. A. Robertson, R. Jardine; *Physician and Surgeon*, H. Murray.

Police District Surgeons.—*Central*, T. K. Dalziel; *Western*, T. Johnstone; *Eastern*, W. G. Young; *Southern*, J. Chalmers; *Northern*, R. W. Bruce; *St. Rollox*, J. Glaister; *Marine*, J. Hardie.

Medical Officers of Health.—*City*, J. B. Russell; *Burghs—Maryhill*, A. Hay; *Partick*, J. Paterson; *Hillhead*, J. Christie; *Govan*, J. Barras; *Kinning Park*, J. Chalmers; *Pollokshields (East)*, E. M'Millan; *Crosshill*, E. Duncan; *Govanhill*, J. V. Wallace; *Cathcart*, A. Brown; *Eastwood*, W. Walker.

Convalescent Home, Lenzie.—*Visiting Physicians*, D. P. Stewart, W. Whitelaw; *Examining Physician*, H. Wilson.

Mission Coast Home, Saltcoats.—*Visiting Physician*, R. Kinnier.

Kilmun Sea-Side Home.—*Visiting Physician*, J. Dickie.

Dunoon Sea-Side Homes.—*Visiting Physician*, J. Ritchie; *Examining Physician*, R. Perry.

Convalescent Home, Helensburgh.—*Examining Physician*, W. J. Fleming.

East-Park Home for Infirm Children.—*Visiting Physician*, R. W. Bruce.

Home for Incurables, Broomhill.—*Visiting Physicians*, W. Whitelaw, D. P. Stewart; *Examining Physician*, J. W. Anderson.

Blind Asylum.—*Surgeon*, T. Lapraik.

Deaf and Dumb Institution.—*Consulting Physician*, T. M'Call Anderson; *Surgeon*, Eben. Duncan.

Training Home for Nurses.—*Consulting Surgeons*, Sir G. H. B. Macleod, G. Buchanan; *Consulting Physicians*, W. T. Gairdner, T. M'Call Anderson; *Visiting Physicians and Surgeons*, G. T. Beatson, J. C. Renton.

Sick Poor and Private Nursing Association.—*Consulting Surgeon*, G. Buchanan; *Consulting Physician*, T. M'Call Anderson; *Obstetric Surgeons*, J. L. Steven, M. Black; *Consulting Surgeon and Physician for Out-door Department*, R. C. Lees; *Dental Surgeon*, J. C. Woodburn; *Surgeon*, H. C. Cameron; *Physician*, J. L. Steven.

Medico-Chirurgical Society (Session 1887-88).—*President*, T. M'Call Anderson. *Medical Section—Vice-President*, D. C. M'Vail; *Council*, J. W. Anderson, S. Gemmell; *Secretary*, G. S. Middleton. *Surgical Section—Vice-President*, A. Patterson; *Council*, A. E. Maylard, D. N. Knox; *Secretary*, J. Barlow. *Pathological Section—Vice-President*, J. Coats; *Council*, A. Robertson, W. Macewen; *Secretary*, T. K. Dalziel. *Obstetrical Section—Vice-President*, J. Stirton; *Council*, E. M'Millan, A. Wallace; *Secretary*, T. F. Gilmour. *Treasurer*, H. Thomson; *General Secretary*, W. G. Dun.

Southern Medical Society (Session 1887-88).—*President*, E. M'Millan; *Vice-President*, J. Glaister; *Treasurer*, T. F. Gilmour; *Secretary*, J. Erskine; *Editorial Secretary*, R. A. D. Robb; *Seal Keeper*, J. Hamilton; *Convener of Court Medical*, J. Morton.

Pathological and Clinical Society (Session 1887-88).—*President*, W. T. Gairdner; *Vice-President*, D. Newman; *Treasurer*, J. B. Russell; *Secretaries*, A. E. Maylard, J. L. Steven; *Members of Council*, President, Vice-President, Treasurer, Secretaries, G. S. Middleton, J. Finlayson, H. E. Clark, T. S. Meighan.

Obstetrical Society (Session 1887-88).—*Hon. President*, W. Leishman; *President*, A. Wallace; *Vice-Presidents*, J. S. Nairne, M. Cameron; *Treasurer*, R. Pollok; *Reporting Secretary*, R. Park; *Secretary*, G. A. Turner; *Members of Council*, J. Marshall, J. Glaister, W. L. Reid, P. C. Smith, D. Tindal, Skene Keith.

Glasgow and West of Scotland Branch of British Medical Association (Session 1888).—*President*, J. Coats; *President-elect*, D. Macleod; *Vice-Presidents*, J. Morton, D. Fraser; *Representative Member on Council of the Association*, Bruce Goff; *Members of Council*, D. C. M'Vail, J. Christie, G. Willis, J. D. M'Laren, A. W. Smith, W. Frew, D. Yellowlees, J. Glaister, W. Haldane; *Honorary Secretaries*, A. Napier, A. Robertson.

GLASGOW: PRINTED BY ALEX. MACDOUGALL.